IN THE CIRCUIT COURT OF THE
ELEVENTH JUDICIAL CIRCUIT
IN AND FOR MIAMI-DADE COUNTY, FLORIDA
GENERAL JURISDICTION DIVISION
CASE NO. 00-3030 CA 11

GAIL ROUTH,
Plaintiff,
vs.
PHILIP MORRIS INCORPORATED,
("PHILIP MORRIS U.S.A."),
et al.,
Defendants.
_____/

Miami-Dade County Courthouse
Miami, Florida
October 3, 2003
Friday, 1:30 p.m.

TRIAL - VOLUME 15

The above-styled cause came on for trial before

the Honorable Herbert Stettin, Circuit Judge, pursuant to notice.

2180

APPEARANCES:

On behalf of the Plaintiff:

ANGONES, HUNTER, McCLURE, LYNCH & WILLIAMS
BY: Steven Kent Hunter, Esq.
-and-
KLUGER PERETZ, P.A.
BY: Stuart Silver, Esq., and
Keisha Harris, Esq.
On behalf of the Plaintiff

SHOOK HARDY & BACON, L.L.P.
BY: Kenneth J. Reilly, Esq.
On behalf of the Defendant, Philip Morris

SHOOK HARDY & BACON, L.L.P.
BY: William Geraghty, Esq.
On behalf of the Defendant, Lorillard

ADORNO & YOSS, P.A.
BY: Anthony Upshaw, Esq.
On behalf of the Defendant, Brown & Williamson

WOMBLE CARLYLE SANDRIDGE & RICE
BY: Jonathan Engram, Esq.
On behalf of the Defendant, RJ Reynolds

I N D E X

2182

(THEREUPON, the following proceedings were had:)
THE COURT: Good afternoon.
Be seated.
Your best estimate on how much longer on direct?
MR. REILLY: Five minutes.
THE COURT: And on cross?
MR. HUNTER: I don't know, Judge. I really can't even give an estimate.
THE COURT: More than 30 minutes?
MR. HUNTER: More than 30 minutes.
THE COURT: Less than two hours?
MR. HUNTER: Less than two hours. The only thing I ask, Judge, is my video, my video man is stuck in traffic. He needs five minutes

to set up my video.
THE COURT: You need it from the very beginning of your cross?
MR. HUNTER: Yes.
THE COURT: How far away is he?
MS. JAUME: Two minutes. He's got five minutes.
MR. HUNTER: All right.
THE COURT: How long will the direct on your second witness be today?

2183

MR. GERAGHTY: I would say between an hour and 15 and maybe as long as an hour and 30 minutes.
THE COURT: We will get him in today.
MR. GERAGHTY: I'm sorry.
THE COURT: We will get him in today.
THE CLERK: You still have one missing. I will go in in a minute to see if he's back.
(Thereupon, the jurors entered the courtroom.)
THE COURT: Good afternoon, ladies and gentlemen. Please be seated. We are going to continue with the direct examination of Dr. Villa.
Doctor, if you can come back up.
MR. REILLY: Ready?

DIRECT EXAMINATION -- CONTINUED

BY MR. REILLY:

Q. Doctor, we were talking about Ms. Routh's response to Iressa.

You have indicated that you have previously been involved in clinical studies involving Iressa.

Could you explain to the jury both, maybe this is -- it is a compound -- I will do it one at a

2184

time.

Would you explain to the jury how Iressa came about? In other words, as an engineered chemotherapy as opposed to a trial and error chemotherapy?

A. Well, Iressa came about because we found that one of the growth factors, the autocrine growth factors that are mentioned in that exhibit --

Q. One of the genes?

A. No. Growth factors.

Q. Growth factors. Sorry.

Go ahead.

A. Okay. It is called epidermal growth factor. It is a fancy name for a receptor. That when it is activated, the cell begins to grow.

So it was reasoned that if we could somehow block that signal that told the cell to grow

that we would actually slow down or actually kill the cell.

Now, taking it a step backwards, that receptor is, of course, coded by one of the -- of the genes in the malignant cell.

So the sequence is the cell, malignant cell has this gene, the gene comes to the receptor, would block the receptor and the cell either shrinks

2185

or dies. Essentially you are cutting off the fuel.

It is like no more gasoline.

Q. Was that a hit or miss thing or was that intentionally engineered?

A. No. That was intentionally engineered.

Q. An advance in science of a very recent nature?

A. They have been in testing in the last -- less than a decade.

Q. Are there more Iressas, more members of Iressa family coming down the pike?

A. Not only coming down the pike. There is at least one that is fabulously effective called Gleecec, G L E E C E C.

Q. It does nothing for lung cancer?

A. Unfortunately, it doesn't work in lung cancer because the family of growth factors -- It is this one here. Epidermal growth factor receptors.

The family of growth factor receptors, we usually note it was one and then it became two. Now we know it is four and it may multiply.

So each of the receptors, even though they are in the same family, are different.

Q. Very complex?

A. Yes.

2186

Q. Doctor, you have shown the jury the six or seven reasons why you have come to the conclusion that Ms. Routh's lung cancer was not caused by secondhand smoke. Her age of onset, the level --

MR. HUNTER: Judge, I object. This is a leading question. He's just repeating --

THE COURT: Rephrase it, sir.

BY MR. REILLY:

Q. Doctor, I just want to get to the conclusion of your direct exam.

You had a variety of reasons why Ms. Routh's lung cancer, in your opinion, was not caused by her exposure to secondhand smoke?

A. That is correct.

Q. One had to do with her age. Her level of exposure?

MR. HUNTER: Judge, again, this is repetitive. He's expressed his opinions.

THE COURT: It is, sir. If you would

like, ask him and let him say it.
BY MR. REILLY:
Q. Doctor, would you just give us the six?
A. The basic reasons are --
MR. HUNTER: Judge, he's written them down on the board. He's explained them adequately.

2187

THE COURT: Overruled. All right.
THE WITNESS: Number one, the age. Number two, the classification, the nature of the disease under the microscope.
Number three, the clinical progression. Number four, the survival. Number five, the response to therapy, and number six, the documentation of an actual genetic disorder in this young lady.
Those are all facts. There are -- None of them are theoretically. They are there.
BY MR. REILLY:
Q. Doctor, is there any test that either has been done or could be done with Ms. Routh that would tell definitively what caused her lung cancer, that would prove what caused her lung cancer?
A. No, sir.
Q. She is currently on Iressa.
Can you describe for this jury what her condition is today?

A. She has achieved a complete clinical remission, meaning at this point there is no detectable disease we can detect by x-rays, clinical findings.

MR. REILLY: No further questions, Your Honor.

2188

THE COURT: Cross-examination, sir.

MR. HUNTER: Your Honor, I need about five minutes to set up my equipment. Can we take a brief reverse?

THE COURT: Sure. If it will take five minutes, you can stand, stretch your legs and go back in the jury room.

Sir, you can step back.

We will be in recess for five minutes.

(Thereupon, the jurors exited the courtroom.)

(Thereupon, a recess was taken, after which the following proceedings were held:)

THE CLERK: All rise.

THE COURT: Are we ready?

MR. HUNTER: Judge, could you give me two minutes so I can learn how to do this?

MR. REILLY: Judge, I would move for the admission of the blow-ups that Dr. Villa has marked on.

THE COURT: Any objections?
(Thereupon, a discussion was held off the record, after which the following proceedings were held:)

2189

MR. REILLY: Judge, I see Mr. Hunter has oriented himself to the equipment, and I notice some of the things he is putting up, some of them contain completely irrelevant information. For example --

THE COURT: Before you put it up, show it to opposing counsel. If there is a problem, we will do it sidebar.

In the meantime, Mr. Hunter, any objection to the admission into evidence of the boards used in direct examination?

MR. HUNTER: Yes. I object to anything that is not an actual photograph in this case.

MR. REILLY: All I did was use the photo micrographs.

MR. HUNTER: No objection.

THE COURT: Without objection, defendants' next numbered.

All right. Come back on.

MR. UPSHAW: Do you want to put on the record the number?

MR. REILLY: We will get it on the record.

MR. UPSHAW: We will do that?
THE COURT: Bring in the jurors.
THE CLERK: All rise.

2190

(Thereupon, the jurors entered the courtroom.)

THE COURT: Please be seated. Mr. Hunter, cross examination.

MR. HUNTER: Thank you, Judge.

CROSS-EXAMINATION

BY MR. HUNTER:

Q. Doctor, good afternoon.

A. Good afternoon, Mr. Hunter.

Q. You were asked some questions by Mr. Reilly about a case that you testified in favor of my client against the tobacco industry which involved oral cancer and bladder cancer in a direct smoker.

Do you recall that line of questioning?

A. Yes, sir.

Q. I will get to that subject in a minute. I would like to talk to you about some of the things you testified about, and if I might, let me start off with your background.

You testified you spent a period of time with the National Institute of Health?

A. That’s correct.

Q. And you said that was one of the premier research institutions in the world?

A. Yes, sir.

Q. Do you believe that the information that is put out by the National Institute of Health is reliable and truthful concerning secondhand smoke and whether it causes lung cancer?

MR. REILLY: Objection.

THE WITNESS: I believe the information is reliable and honest, but it is their best opinion, yes.

BY MR. HUNTER:

Q. Now, you were asked a question by Mr. Reilly as to whether you had testified in -- in other types of cases, and I believe you testified that you had, in fact, testified in cases involving medical malpractice.

A. Yes, sir.

Q. Would I be correct in assuming that generally you testify on behalf of the doctors?

A. That is correct.

Q. And you were asked whether you advertised or promoted yourself in any way. And I assume that that was -- that your answer was that you did not promote yourself in any way as an expert witness?

A. That is correct.

Q. Okay. But if -- if I were to get on the
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Internet and type in Luis Villa, Jr., I would get a hit, would I not?
A. I have never done that. I have never put any information on the Internet about myself. In fact, if I have surfed the Internet more than five times in my life, that is too many.
Q. Okay. Well, you are very modest. How about maybe the group you are with?
A. Oh, Oncology Radiation Therapy?
Q. Yes, sir.
A. I imagine they have something there. I was not the architect.
Q. Okay. Let me show counsel.
Doctor, I'm going to put something on this Elmo. It is going to take a second to look at it. My first question to you, if I put something up there on this screen, can you see that?
A. I can see.
Q. Have you ever done a search on Google?
A. Never seen it. I have no idea about it.
Q. See how I put your name in highlights?
A. Yes.
Q. All right. Let me ask you, are you aware if you type in your name, that Google will give you this image, Dr. Luis Villa, graduated from Harvard

2193
Medical School, then pursued eight years of post-graduate, and then if you -- if you click on that, you get this picture.
A. I have never seen that.
Q. Because you are better looking than that, aren't you?
A. It looks a little younger. I have never seen that.
MR. REILLY: We will stipulate to that, Your Honor.
BY MR. HUNTER:
Q. Now, the reason I go through this, Doctor, is that on your web site or on the web site of your group --
MR. REILLY: Your Honor, all I ask is that I get to see them before he puts them up, that is all.
THE COURT: Yes, sir.
MR. REILLY: It is not a big request.
BY MR. HUNTER:
Q. All right, Doctor. If I move too fast or I shake this, or it is not in focus --
I could get on the web site, if I wanted to know about non-small cell lung cancer and treatment, I would have a little click. If I wanted
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to go to lung cancer prevention, I could get information from your web site from your medical group on this web site; correct?

A. I don't know.

Q. Okay. Well, do you deny that -- Now I have shown you these documents. Take a look at that. Do you deny that your group puts this out for the patients and --

A. I do not deny it. I'm ashamed to say I didn't know.

Q. Okay. Let me go to this document where it talks about secondhand smoke.

If your group tells the public and patients that environmental or secondhand tobacco smoke is always implicated in causing lung cancer, that would be different from your testimony here today?

A. Absolutely. Yes.

Q. Now, is it maybe that the rest of the doctors in your group think that secondhand smoke causes it and you don't? Or do you have an explanation for why your web site would say "causation"?

A. Counselor, I do not know who in my group authored that or in any way gave the blessings for

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this information.

Q. Let me show you this from the web site. "The chance of developing lung cancer is increased by exposure to environmental tobacco smoke, the smoke in the air when someone else smokes. Exposure to environmental tobacco smoke, or secondhand smoke, is called involuntary or passive smoking." Do you agree with that statement?

A. No. I would have modified the way this statement is written. This one and the previous one.

Q. Okay.

A. I don't think it should have been written in that particular way.

Q. All right. Let me show you, you may take your seat.

A. Thank you.

Q. And let me ask you this question: You said to us that the National Institute of Health was the premier research institution, I guess in the world.

A. Yes.

Q. Okay. Do you believe that they put out truthful and honest information for the public on their public statements and disclosures as it

2196

relates to secondhand smoke?

A. I believe they put out what they believe

is correct, yes.
Q. And you believe that that is an authoritative position to take?
A. Yes.
Q. Okay. Did you know, before I started doing this that if you -- that the National Institute of Health has a web site?
A. I did not know they have a site.
Q. All right. And the National Cancer Institute is one of the resources of the National Institute of Health; correct?
A. That is correct.
Q. Okay. So if I wanted to know what the position of the National Institute of Health, the premier research institution in the world, had to say about secondhand smoke, then I could click on the National Cancer Institute, and if I got this information, let me ask you if you would agree with it.
MR. HUNTER: Is that good for everybody?
BY MR. HUNTER:
Q. Okay. "When a cigarette is smoked, about half of the smoke generated is sidestream smoke,

2197

which contains essentially the same compounds as those identified in the mainstream smoke inhaled by the smoker. Some of the chemicals in environmental

tobacco smoke include substances that irritate the lining of the lung and other tissues, carcinogens, cancer causing compounds, mutagens, substances that promote genetic changes in the cell and developmental toxicants, substances that interfere with normal cell development.

"Tobacco smoke is known to contain at least 60 carcinogens, including formaldehyde and benzopyrene and six developmental toxicants, including nicotine and carbon monoxide."

Do you agree with that statement so far?

A. Yes, I do.

Q. Now, let's go to this. This is -- I apologize. My eyes aren't good enough to read the screen. If it is not in focus, please let me know.

Do you believe that nonsmokers who are exposed to environmental tobacco smoke absorb nicotine and other compounds just as smokers do?

As the exposure to ETS increases, the levels of these harmful substances in the body increase as well. Although the smoke to which a nonsmoker is exposed is less concentrated than that

2198

inhaled by smokers, research has demonstrated significant health risks associated with ETS."

Do you agree with that statement?

A. Yes.

Q. Okay. And then how about this statement: "Environmental tobacco smoke, ETS" -- I'm reading from down here at the bottom -- "can cause lung cancer in healthy adult nonsmokers."
A. I would say ETS may cause lung cancer in healthy adult nonsmokers.
Q. But you would agree, the National Institute of Health, the premier research institution in the world says it can; correct?
A. I agree, yes.
Q. Okay. Now, you might want to take your seat, if you might.
Now, you also testified to this jury that you were associated, and I believe this was in the past, you were associated with the Cedars Medical Center?
A. That's correct, sir.
Q. Do you believe that the Cedars Medical Center is a -- is a good, valid, viable, respectable medical institution in our community?
A. Yes, I believe that. I agree.

2199

Q. And how long were you with Cedars?
A. About ten years.
Q. Okay. Do you believe that Cedars Medical Center puts out truthful, honest and authoritative information on secondhand smoke for people in our

community?
A. I do not believe that Cedars Medical Center has the expertise to put out any information. I would believe members of the Cedars medical community, or I would give them credit, not the center.
Q. Okay.
A. They do not have either research or an independent study program.
Q. All right. So would, in your opinion, the information, if we were to go to the Internet and look up Cedars Hospital, and we wanted to know whether environmental tobacco smoke can cause lung cancer, would it be authoritative, what we would get from that institution? Or do you think that is just a bunch of folks that don't really know anything? The people that make the web information?
A. Counsel, Cedars is a for profit hospital. I don't know who wrote that. You have got to tell me who wrote it.

2200

Q. Okay. Let me ask you this: You have been involved with hospitals for, I guess, all of your professional career; correct?
A. Yes, sir.
Q. When you were -- Are you still affiliated with Cedars?

A. No, sir.
Q. When you were last at Cedars, what was your role there?
A. I was the chief of pathology.
Q. Okay. And what department is it that puts out information concerning lung cancer and whether secondhand smoke can cause it?
A. Well, I was a member of the oncology department. As far as I knew, no one ever asked me my opinion, and I don't think they ever asked the opinion of any of the oncologists. So I don't know who puts out that information.
Q. Do you know Lori LaRusso?
A. No. Is she a physician?
Q. I don't know her position. She's got an MS degree and an ELS.
A. She's not a physician.
Q. Well, let me ask you this: Let me show you this document and ask you if you would dispute

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the information.
First of all, do you have any quarrel with the fact that this is on the Internet as we speak, put out by Cedars Medical Center?
MR. REILLY: Objection, Your Honor.
THE COURT: Did you know, you say?
THE WITNESS: I will take your word. I

have not looked for this.
BY MR. HUNTER:
Q. Okay. All right. Do you see what I have highlighted there?
A. Yes, sir.
Q. Do you agree that that is a valid bonafide information that should be told to the public by the folks there at Cedars Medical Center?
MR. REILLY: Objection, Your Honor.
THE WITNESS: I think --
THE COURT: Wait just a second. May I see it?
Thank you. The highlighted portion on the bottom of the page, sir?
MR. HUNTER: Yes, sir.
THE COURT: Is there an objection to the use of this document?
MR. REILLY: I mean, there is a -- There

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are plenty of resources, Your Honor. I object to that.
THE COURT: You do?
MR. REILLY: It is a misuse of the document.
THE COURT: Overruled.
Answer.
THE WITNESS: It says, "The following can

cause damage to the cells in the lungs that can lead to lung cancer."

On the first bullet is first or secondhand cigarette smoke. I would say first, absolutely, definitively. Second, may or may not.

BY MR. HUNTER:

Q. Okay. I believe you told us -- Are you a member of the American Medical Association?

A. I believe I am.

Q. Okay. Would you believe that the American Medical Association would put out legitimate, truthful, honest literature on whether secondhand smoke causes lung cancer?

A. Honest and legitimate? Yes. Truthful, it depends on the source.

Q. Well, the American Medical Association.

2203

A. My statement stands.

Q. All right. Do you believe that their position that they put out concerning the American Medical Association's physicians dedicated to the health of America, whether their position on whether secondhand smoke causes disease is an authoritative opinion on the subject?

A. I think it is a reliable opinion, yes.

Q. Okay.

MR. HUNTER: Mr. Reilly, can you read or do you want me to pause while you look?
I don't want to be talking while you are reading.
MR. REILLY: You are all right.
BY MR. HUNTER:
Q. Now, I believe you had told us that one of the -- one of the societies you were with or the colleges was the College of American Pathologists?
A. That's correct.
Q. All right. Let me show you the web site from the Society of American Pathologists.
Certainly you would agree with the information that they put out to the public concerning secondhand smoke as reliable and truthful and authoritative?

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Did you know that your college says to the public, "The hazards of smoking are not limited to smokers. Nonsmokers who are exposed to passive smoke, smoke from someone else's cigarette, cigar or pipe are also at risk."
Do you agree with that?
A. I'm sorry. I was reading it myself.
Q. All right. Go ahead. I don't mean to get ahead of you.
A. I will be happy to comment on this.

Q. Okay. Well, how about that first sentence there that I read? Were you okay with that so far?
A. I agree with that.
Q. Okay. Then go to the next -- Well, let me ask you this: I understood from your testimony that you felt the studies by the people who look into this hadn't proved anything yet. Is -- was that -- Is that a correct paraphrasing?
A. My testimony is that the studies show an association, they do not show that indirect smoking is a cause of cancer. That is correct.
Q. All right. Do you agree that the dangers which have been documented repeatedly in studies conducted by national and international health and scientific bodies include coronary disease and lung

2205

cancer?
A. The dangers, yes, I would agree with that. That doesn't mean that it has been proven that indeed that happens. The statement says that there are dangers. It doesn't say that they are definitively proven.
Q. Well, how about more likely than not?
A. No, it hasn't been more likely than not.
Q. All right.
A. If I was asked about one of my patients --
Q. Doctor, I need to ask you the questions.

MR. REILLY: Your Honor --
THE COURT: One second. He doesn't need to expand that answer.
Go ahead, sir.
BY MR. HUNTER:
Q. Doctor, do you agree with this statement, "The most common reactions include watery, inflamed and irritated eyes, irritated and swollen sinuses, headaches and nausea"?
A. I agree.
Q. You agree that burning tobacco releases 4,000 chemicals, including 200 known poisons into the air? Some of the more harmful components of cigarettes smoke are ammonia, formaldehyde,

2206

nephalene, cyanide, arsenic and nicotine?
A. I agree.
Q. Arsenic is what they used to use in bug spray before they outlawed it?
A. It is also used as a chemotherapeutic agent. It kills cancer cells.
Q. You don't mean to suggest to us, I mean, even laughingly, that the arsenic in cigarette smoke has got any beneficial aspects?
A. You don't know that.
Q. You think it might?
A. I don't know that. You are speculating.

Q. Well, I'm asking you as a doctor, as an expert, do you think the arsenic in cigarette smoke is helpful to the people who breathe it in?
A. I have no answer to that. I do not know.
Q. Scientists call the smoke that curls from the lighted tip of a cigarette sidestream smoke because it burns at a lower temperature, and it produces more of the toxic and carcinogenic cancer-causing substances than does the smoke from the smoker's end of the cigarette.
Do you agree with that?
A. I don't know if that is true. I don't know the answer to that.

2207

Q. Okay. Do you think that your College of Pathologists -- Well, let me ask you this: You are not a lung pathologist, are you?
A. No. I am a general pathologist and a hemapathologist.
Q. When you read Dr. Barsky -- excuse me, not Dr. Barsky -- Dr. Roggli, the witness that we brought here from Duke University, you realize he was a pulmonary pathologist and he specialized in that field?
A. Yes, I do.
Q. Do you agree, though, that because the -- the smoke, which comes off the tip of the cigarette

is burnt at a lower temperature, that it has more of the chemicals in it than the -- than the -- than the smoke which is pulled through the cigarette by the smoker when he inhales, because as he inhales, it makes the temperature go up, and there is more completion combustion? Do you agree with that as a general principle?

A. I don't know whether that is true or not. I have heard that mentioned. I don't know if there is enough evidence to support that.

Q. But do you believe that your colleagues would put that information out for the public if it

2208

wasn't correct?

A. It depends who wrote this. Hopefully it is not the same as Cedars, it didn't have an M.D.

Q. Let me ask you to go down here to the bottom, where it says, "The Environmental Protection Agency estimates that more than 3,700 nonsmokers will die every year from lung cancer. Many patients with lung cancer are known to have had no exposure to any kind of carcinogen other than the smoke of others. It is estimated that passive smoke now causes 220" -- Cause. Do you see that, they used "cause" there?

A. Yes.

Q. All right. "Causes 22,000 new cancers of

all types annually, including 7,000 though in people who never smoked."

Do you agree with that statement?

A. I agree that all of those are estimates. The key word there is "estimate." You would have to show if the estimates are correct. How do you show that the estimates are correct?

Q. Well, I don't know. I would have thought if the College -- if the College of American Pathologists put this information out, that they would have made some investigation to think that is

2209

more probable than not or else they wouldn't have told the public that?

MR. REILLY: Object to the form, Your Honor.

MR. HUNTER: I will withdraw the question.

THE COURT: Members of the Jury, disregard that statement. Counsel withdrew the question.

BY MR. HUNTER:

Q. Let me read the next statement, and if I'm moving this around, before I get to the bottom line, let me -- of this, let me ask you if you agree.

Do you understand the principle of dose response?

A. Yes.

Q. And that is that if you have -- Explain to

the jury what the definition of "dose response" is.
A. It means that there is a mathematical relationship. It can be linear. It can be log, it can be non-linear, the certain amount, whatever it is, a chemical, a medication, and you can make a mathematical relationship between exposure and results.
Q. All right. Now, can you see all of the way to where I'm standing? Can you see my board?
A. Yes, sir. Yes.

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Q. All right. What I have drawn here is a chart with the levels of the amount of exposure on the right, and I'm writing again, I did this for the jury in opening. And a line that goes up, I guess this would be amount down here.
A. It would be the amount on the bottom and incidence on the right side, counselor.
Q. Okay. Incidence means how many people show an effect of the exposure; correct?
A. Assuming that you are following, for example, a disease, that is correct.
Q. Right.
A. If you are following a drug effect, then it would -- you would be measuring something else.
Q. Okay. If you are measuring exposure to a toxic substance such as cigarette smoke?

A. What would you measure -- incidences of cancer?
Q. Yes.
A. Okay. You are -- That's correct.
Q. So -- So as the amount increases, the amount of smoking, the incidence of the disease would increase and it would show some sort of a -- what did you say, linear?
A. That is a linear relationship. That is

2211

correct. What you are showing is a linear relationship.
Q. And the relationship between lung cancer and smokers is what type of relationship?
A. It is a linear relationship.
Q. Okay. And that has been demonstrated, do you believe, without doubt?
A. I agree.
Q. Okay. Now, the effects of cigarette smoke are such that on this linear line that we can predict -- you can extrapolate downwards; correct? With mathematical precision? Because it is linear.
A. That is incorrect.
Q. That is incorrect?
A. Yes -- Well, no. I don't want to tell you that you are incorrect in that sense. You can get a mathematical relationship that you can test at those

exposures. It is an estimate. And you can test if the estimate is correct at those exposures.

Once you go below a certain exposure, then you are doing it only by mathematics, and you can't predict, because you can't test it. I mean, you can predict, but you can't test it. So you are making a prediction, but there is no way to test it one way or another.

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Q. Okay. But the reason that you could predict is because it is linear. You can then predict that it will continue to be linear, even though you can't test it, and that is why you can make a prediction; correct?

A. No, sir. That is completely incorrect. You can predict that it is linear at the amount that you can test.

Q. Right.

A. But it may not be linear as you go down or even as you go up.

Q. All right.

A. On exposure.

Q. And would you agree with me that the chemicals in and the carcinogens and mutagens in cigarette smoke are such that there is no safe level along this line?

A. I think that is completely -- I shouldn't

say incorrect. I think that that is a guess. There is no proof that there is no threshold at which there is no cancer risk.

And that actually is a general biologic fact as exemplified, for example, by chemotherapeutic agents, which at a certain level they are absolutely carcinogens and below a certain

2213

level are actually good for you.

Q. Let's see what the College of American Pathologists says about this concepts.

It says that "no one is sure," reading from this last line here?

A. Uh-huh.

Q. Let me -- "No one is sure what amount of tobacco smoke," and remember, now, this subject we are talking about here is not mainstream smoking, but when others light up, no one is sure what amount of tobacco smoke or any other carcinogen, and now I'm getting up to the top here, carcinogen will cause cancer. There is no such thing as a "safe" level of exposure.

Do you agree with your colleagues at the College of Pathology, that there is no such thing as a safe level of exposure for environmental tobacco smoke?

A. Could you please go back to the first

part?
Q. Yes, sir. You have it there, didn't I give you a copy?
A. Yeah, but I would like to read it from. No one is sure what amount of tobacco smoke or any other carcinogen will cause cancer. They are saying

2214

no one is sure what the level is. And then they are saying there is no such thing as a safe level.
Well, there are two ways of looking at that. It means they are not sure if there is a safe level or not. Because you cannot say at the beginning that you don't know the level at which it causes or doesn't cause cancer. And then at the end you say there is no such thing as a safe level. That -- To me, that is contradictory.
Q. All right. So you think is there a safe level?
A. No, I don't think we know if there is a safe level.
Q. Well, it seems like -- When you say "we," who are you talking about? Because it seems like your group, the College of American Pathologists says there is no such thing as a safe level.
A. No, but the --
Q. Who is "we"?
A. The first sentence is saying that they

don’t know what the level is that causes cancer. This is contradictory.

Q. All right. Now, do you believe that the American Cancer Society puts out truthful, honest and accurate information about secondhand smoke?

2215

That is the first question. And then I will -- You can either read from the screen. I’m going to highlight it.

A. I agree that that is what the American Cancer Society has said, yes.

THE COURT: The question is, do you agree that the American Cancer Society puts out truthful -- What was the rest of the question?

BY MR. HUNTER:

Q. I forget. But do you believe that the American Cancer Society puts out truthful and authoritative information?

A. Yes, I believe they do.

Q. Okay. Would you agree that the study of the American Cancer Society cited by your college shows that a woman who doesn’t smoke but whose husband smokes at least 20 cigarettes a day at home has twice the chance of getting lung cancer as a woman who comes from a home where neither she nor her husband smoke?

A. I have read that data and I agree the

American Cancer Society says that, yes.
Q. Do you think that is just a coincidence?
A. It may very well be. There is an association, there is no proven causation.

2216

Q. All right. Let's go to the next page. "Why is passive smoke in the workplace a concern?"
And it says, "Many people's greatest exposure to passive smoke comes not at home, but in the workplace."
"Most studies of air quality done inside office buildings find the number one pollutant is tobacco smoke. The EPA now includes passive smoke on its list of Group A, very hazardous, human carcinogens along with asbestos, radon and benzine."
"The growing realization of this danger has prompted many businesses to declare their companies to be smoke free environments."
Do you agree with that statement?
A. Yes, I agree with this. I agree that that is -- that is what it says. I don't think it has been proven to be a carcinogen at the level of passive smoking.
Q. Have you -- let's -- Let me highlight this.
When I took -- You recall me coming out and taking your deposition; correct?

A. Yes, sir.
Q. You had the Environmental Protection Agency report in your reliance materials; correct?

2217

A. Yes, sir.
Q. Now, you know that the Environmental Protection Agency, they have concluded that secondhand smoke causes lung cancer; correct?
A. Yes.
Q. So you disagree with the Environmental Protection Agency?
A. That is correct. With that conclusion, yes.
Q. And it says here, it says, "Ironically, although the EPA is authorized to regulate the smoke that comes from a smoke stack, it presently cannot regulate the smoke coming from a cigarette in a ten by ten foot office. Passive smoke is not regulated, but the evidence that passive smoke is now a known carcinogen" --
MR. REILLY: Your Honor, I would object to the relevance of this.
THE COURT: Overruled.
MR. REILLY: It is irrelevant.
BY MR. HUNTER:
Q. "Will provide further stimulus to all levels of government and to the public for the

development of stricter anti-smoking legislation."
Do you agree with that statement?

2218

MR. REILLY: Same objection.
THE COURT: Overruled.
THE WITNESS: I think it must be written before the recent laws because it is regulated.

BY MR. HUNTER:

Q. Well, do you know when they banned smoking on airplanes?

A. I don't recall the exact date, no.

Q. Do you think they banned smoking on airplanes because it wasn't harmful to the people on the planes or they wanted to punish the smokers?

MR. REILLY: Objection.
THE COURT: Sustained.

BY MR. HUNTER:

Q. All right. Do you know why they banned smoking on airplanes?

A. Yes, because there is data in the workplace that suggests there is a probable link between secondhand smoke and cancer, secondary smoking.

Q. In fact, they actually analyzed flight attendants, did they not, and the EPA came or -- I'm sorry, not the EPA, but they did studies of flight attendants and they made predictions of how many

premature deaths would occur to flight attendants on
2219
their exposure to secondhand smoke; correct?
A. Correct. Unfortunately, the predictions
were wrong and they have been shown to be wrong.
Q. Well, we will get to that in a minute.
Down here is the cite to the Surgeon General.
Do you agree that the Surgeon General
takes an authoritative position on whether
secondhand smoke causes cancer?
A. I agree.
Q. And you know the Surgeon General has felt
since 1986 that it has been proven scientifically
that secondhand smoke causes lung cancer?
A. Yes. I know they have said that, yes.
Q. And you know that they proved that in
several different ways. They did it with
epidemiology; correct?
A. I don't think they have proven it, but
they, yes, they tried with epidemiology.
Q. I will rephrase my question. At least as
far as the Environmental Protection Agency and the
Surgeon General of this country is concerned, they
established causation through epidemiology; correct?
A. I don't think that they have established
causation. That is what I have been saying all
morning.

2220

Q. I understand, because you don't agree with that. But at least to their satisfaction they had established it.

A. That is correct.

Q. And that one of theirs was through epidemiology; correct?

A. Yes, sir.

Q. And one area was biochemical analysis of the components in smoke to see whether they were toxins, carcinogens and mutagens; correct?

A. I don't think that proves anything. It proves that the carcinogens exist. It doesn't prove that they actually work.

Q. Have you ever heard of the term "biological plausibility"?

A. Yes.

Q. Isn't the concept of biological plausibility fully illustrated by the fact that if mainstream cigarette smoke can cause lung cancer, then it is biologically plausible that secondhand smoke can cause lung cancer?

A. I agree completely with your statement.

Q. Now, getting to the Surgeon General's opinion here that passive smoke is a major contributor factor to cancer.

2221

You disagree with that?
A. I don't know what "major" means. That is not a quantitative measurement.
Q. Major seems to be, you know, substantial; it is a contributing factor.
A. 180,000, there are 3,000 that are secondary smoke under their predictions. Is that major? That is their position. I think it is a philosophical definition.
Q. Well, if you take 3,000 of 180,000, there is a certain percentage chance -- Let's assume that 3,000 is accurate; correct? There is --
A. Everyone says 2- to 4,000. Take 4,000, whatever.
Q. Okay. You can calculate a statistical chance in that population that you are going to be one of the 4,000; correct?
A. Yes.
Q. But if you are -- you get lung cancer and you are in that 4,000, then it is a hundred percent for you; correct?
A. Yes. That is correct. But that has nothing to do with the chances. Those are two completely separate concepts.
Q. Well, if I was to predict, if I were to

walk across Flagler Street, what is the likelihood

that I would get run over by a red Volkswagen, the chances of that might be one in a million?
A. Yes.
Q. But once I walk across Flagler Street, if a red Volkswagen runs me down, for me it is a hundred percent?
A. Counselor, when a red Volkswagen runs over you, there is a photograph of a hundred people that saw the red Volkswagen. When you get cancer of the lung, there are 20 different ways that you can get cancer of the lung. You can't prove it, you can't photograph it, you can't measure it, you can't see it.
What I have been saying is there is absolutely no way that you can prove that secondhand smoke caused the cancer in this lady.
Q. Okay. Now, in the earlier case that you and I were involved in, we did prove that smoking caused tongue cancer; correct?
A. I think chances are highly likely that is correct, yes.
Q. And we proved it caused bladder cancer?
A. Chances are highly likely that is correct. Nothing is a hundred percent, but highly likely.

2223

Q. In our case that we worked on together, we had no test; correct?

A. That is correct.
Q. All right. In fact, the chances of bladder cancer is different than lung cancer because 90 percent of the people who get lung cancer are smokers; correct?
A. Eighty to 90 percent, yes.
Q. But only about half of the people that get bladder cancer are smokers; correct?
A. That's correct.
Q. All right. But in that case -- and we will get to it in a minute -- you and I both agreed the evidence was without question that smoking had caused bladder cancer?
A. Direct smoking is very likely to have caused his tongue cancer. And not as definitive, but more likely than not also bladder cancer.
Q. And in that case, although he had quit smoking 20 years before, we were still able to show an elevated risk that he was susceptible to bladder cancer and tongue cancer, even though he hadn't smoked for two decades; correct?
A. Well, I -- If I remember correctly, I agreed with that in the tongue. I'm not sure I said

that about the bladder, but, yes, lung and head and neck, it takes a long time before your risk disappears.

Q. Now, let me show you the Environmental Protection Agency's Respiratory Health Effects of Passive Smoking, Lung Cancer and Other Disorders, preliminary findings.

"Passive smoking is causally associated with lung cancer in adults, and environmental tobacco smoke, by the total weight of the evidence, belong in the category of compounds classified by EPA as a Group A, known human carcinogens."

You agree that that was the findings of the Environmental Protection Agency that was made final in their report published, Respiratory Health Effects of Passive Smoking, Lung Cancer and Other Disorders?

A. That was their opinion.

Q. But you just -- Your opinion is different?

A. That's correct.

Q. Okay. Now, let's go through, if we might, the genesis for why the Surgeon General, Environmental Protection Agency, the American Cancer Society and these other groups believe that there is a cause and effect relationship between

2225

environmental tobacco smoke and lung cancer.

It started out, did it not, with a study in Japan by Dr. Hirayama of nonsmoking wives who were married to smoking husbands; correct?

A. I didn't know that was the seminal article, but I'm familiar with the article.
Q. Do you recall how many women were studied by Hirayama?
A. No.
Q. Well, let's go -- let's go to the next page of the EPA.
And if you can't read that --
MR. HUNTER: Can everybody read that?
BY MR. HUNTER:
Q. "Upward trend in exposure response. Both the largest of the cohort studies -- the Japanese study of Hirayama with 200 lung cancer cases -- and the largest of the case control studies -- the US study by Fontham & Associates, with 420 lung cancer cases and two sets of controls -- demonstrate a strong exposure related statistical association between passive smoking and lung cancer. This upward trend is well supported by the preponderance of epidemiology studies. Of the 14 studies that provide sufficient data for a trend test by exposure

2226

level, 10 were statistically significant despite having low statistical power."
Do you agree with that statement?
A. Well, I would like to see what the details were, particularly the statistical data. But that

is what the statement says.
Q. You have not done so before coming here today to check these two studies out?
A. I have checked a lot of studies, and a lot of studies show no statistical significance and the trend is present only at high exposures. When you test very low exposures, there is no trend. Particularly the European studies show no trend at low exposures.
Q. Doctor, let me show you this document. Are you able to give me the genesis of this document? And I will suggest that was in your materials at your deposition. Suggest to you that that was in your materials at your deposition.
A. I'm sorry. Counsel, what would you like for me to do?
Q. Do you know where that came from, what it is?
A. I remember being in my -- in my package is a chapter of out of a book, but I don't remember the

2227

book.
Q. Okay. Let me walk you through some of the high points of this.
Because this book gives us sort of a -- sort of a history, does it not, of the development of the concept that secondhand smoke causes human

disease and specifically lung cancer in healthy nonsmokers.

The 1986 Surgeon General's Report, United States Division of Health and Human Services, 1986b included a review on the same 13 epidemiological studies. They cite Garfinkel, Hirayama, Chang and Fung, 1982, Correa, Trichopoulos, Buffler, Gillis, Kabat and Wynder, Akiba, Pershagen, as well as an assessment of ETS chemistry, deposition and absorption of specific constituents and determination of their cancer genesity. This review focused on qualitative assessments of the studies and concluded that involuntary (passive) smoking is a cause of disease, including lung cancer, among healthy nonsmokers"; correct?

A. That is their conclusion, that's correct.

Q. Everybody is gigging me to put this up as I read.

As we move down: "In an assessment of ETS

2228

in the workplace and its relationship to lung cancer, the National Institute for Occupational Safety and Health reviewed the same 13 studies considered in the NRC report and the Surgeon General's Report, plus eight additional epidemiological studies that were published in 1987 through 1990, Brownson, Gao and Humble, Lam, Geng

and Shimizu. Hole, et al., Janerich, 1990. NIOSH concluded that the results of these epidemiological studies supported and reinforced the 1986 findings of the reports of NRC" -- and is that the National Research Council?

A. I believe that is, yes.

Q. "And the Surgeon -- And the Surgeon General demonstrating an excessive risk for lung cancer of about 30 percent among nonsmokers who live with a smoker compared with nonsmokers who live with a nonsmoker."

"The data on which NIOSH based the conclusion that ETS is potentially carcinogenic to occupationally-exposed workers were not gathered in occupational settings but on the surrogate measure of 'lived with a smoker.'"

Do you see that? Do you agree with that?

A. I think that tells you a lot. They didn't

2229

do it at their workplace, they used the surrogate. That is, in my opinion, completely inappropriate. You cannot use a surrogate if you have a patient like in this case that works in -- in the air industry as a stewardess. You have to study that particular group. You cannot use a surrogate.

Q. Let's move forward now in time to the California Environmental Protection Agency, the

update of the EPA report. Eight additional epidemiological studies were reviewed in addition to the 31 included in the EPA report. And they go back and list them.

The report concluded that the studies subsequent to the EPA report provided additional evidence that ETS exposure is causally associated with lung cancer and that findings of recent studies and the EPA meta-analysis indicated about a 20 percent increased risk for lung cancer among non-smokers.

Were you aware of the California Environmental Protection Agency report?

A. Yeah. It dropped the -- if you noticed, it dropped the estimate to 20 percent.

Q. Okay. Now, you know what a meta-analysis is; correct?

2230

A. Yes, I do.

Q. And are you aware of the Zhong meta-analysis?

A. Yes, sir.

Q. You had that as well in your --

MR. HUNTER: Counsel.

(Thereupon, a discussion was held off the record, after which the following proceedings were held:)

BY MR. HUNTER:

Q. Now, Dr. Zhong conducted a meta-analysis, did he not?

A. Yes, sir.

Q. And did he conclude that secondhand smoke causes lung cancer in nonsmokers?

A. Yes, he did.

Q. Now, you would agree with me that -- What is Dr. Zhong's specialty?

A. I don't know, counsel.

Q. Now, earlier today you were testifying about statistics. Do you recall that line of testimony?

A. Yes, sir.

Q. All right. You are not an expert in statistics, are you?

2231

A. That is correct.

Q. All right. Because when you and I discussed the Zhong article, which was a meta-analysis, you said, "I don't really understand that article because I'm not an expert in statistics"; correct?

A. On a meta-analysis.

Q. But a meta-analysis is where doctors take a bunch of different studies that have been done and then they try to correct them for strength of

association and put them all together and see if they all don't indicate a trend?

A. That's correct.

Q. You would agree with me that Dr. Zhong found when he analyzed several studies that environmental tobacco smoke caused lung cancer in nonsmokers?

A. His conclusion was his meta-analysis supported that conclusion, yes.

Q. Now, are you aware that Dr. Zhong has also conducted studies in addition to this meta-analysis that he's done his own studies?

A. No, I was not aware.

Q. Now, one of the items that the jury has seen, and I will show it to you, have you ever -- I

2232

guess you haven't since you don't get on the internet. You have never seen the web page of Philip Morris?

A. I have never seen it, counsel.

MR. GERAGHTY: Your Honor, I will object.

MR. ENGRAM: We renew our objection.

THE COURT: Members of the Jury, this particular web page of Philip Morris is admitted only for the purposes of Philip Morris, Incorporated. It is not admitted, and it is not to be taken by you as evidence

against the interests of Reynolds Tobacco Company, Lorillard Tobacco Company and Brown & Williamson Tobacco Company individually and as successor to the American Tobacco Company.

We are going to take a recess at 3:00.

BY MR. HUNTER:

Q. Doctor, let me give you the little version, and for the benefit of the jury, I will hold it up again.

"Philip Morris admits that public health officials have concluded that secondhand smoke from cigarettes causes disease including lung cancer."

But your testimony to this jury is that that is not correct? They are all wrong?

2233

MR. REILLY: Well, I object, Your Honor. What is the question? Philip Morris says it on their web site.

THE COURT: Let him rephrase.

BY MR. HUNTER:

Q. If Philip Morris is right and that the public health officials have concluded that secondhand smoke from cigarettes causes disease, including lung cancer, your testimony is that they are all wrong?

A. My testimony is that conclusion is absolutely not definitive.

Q. Does that mean they are wrong?
A. No.
Q. Oh. All right. And they say that, "The public should be guided by the conclusions of public health officials regarding the affects of secondhand smoke."
Do you agree with that?
A. Absolutely.
Q. And this jury is a member of the public, they should be guided by those conclusions; correct?
A. Absolutely. I definitely agree with that one.
Q. And Philip Morris refers people to the US

2234

Environmental Protection Agency.
Do you see that on your copy?
A. Yes.
Q. And the California Environmental Protection Agency report, that is what I was just talking about?
A. Yes.
Q. And we are going to get to the World Health Organization in a minute. But the 1986 US Surgeon General Report. Do you see that?
A. Yes, sir.
Q. Okay.
THE COURT: Mr. Hunter, would this be a

good time to break?
MR. HUNTER: Yes, sir.
THE COURT: We will do it now. Members of the Jury, we will take a 15-minute break. It should be the last break of the day. Don't discuss the case among yourselves or let anyone talk to you about it.
(Thereupon, the jurors exited the courtroom.)
(Thereupon, a recess was taken, after which the following proceedings were held:)
THE CLERK: All rise.

2235

THE COURT: Mr. Hunter, how much longer do you believe you will be, an hour?
MR. HUNTER: I believe what -- I told Mr. Reilly it is hard for me to gauge it.
MR. REILLY: Judge, we have a witness who tells me that he has to go on today. I didn't know that.
THE COURT: Well, I will alert the jury. We can do this, we can interrupt this cross-examination.
MR. REILLY: Pardon?
THE COURT: We can interrupt this cross-examination because you have indicated your direct will be about an hour to an hour

and a quarter.
MR. REILLY: We may have to speed that up.
Let's get --
THE COURT: You want to finish him? It will be after four.
MR. REILLY: I can't ask Dr. Villa to come back another day.
THE COURT: Okay. Fine. I will alert the jury.
THE CLERK: All rise.
(Thereupon, the jurors entered the

2236

courtroom.)
THE COURT: Thank you. Please be seated. Let me alert you to -- let me alert you to a timely problem we are going to have. This witness it is anticipated will be sometime after four. This is another one from out of town that we are going to finish today.
Does anyone have a compelling problem about staying past 5:00?
All right. Thank you. The lawyers have been instructed to speed it up as much as they can.

BY MR. HUNTER:

Q. Doctor, we earlier, I asked you certain questions about the American Medical Association.

I'm now showing you the position of the American Medical Association.

Do you agree with this position?

MR. REILLY: That is the one I told you -- Could we have a conversation sidebar?

THE COURT: Do you need a reporter?

MR. REILLY: Yes. Sure.

THE COURT: May I see it?

(Thereupon, the following proceedings were had at sidebar:)

2237

MR. REILLY: Judge, obviously I haven't had any problem with this, of these that have gone up, it is not a problem. This one happens to talk not about lung cancer but in disease in general. I object.

THE COURT: But it does talk secondhand smoke.

MR. REILLY: It does talk about secondhand smoke. Secondhand smoke and its relationship to other non-related diseases not related to this case shouldn't be admitted in evidence.

THE COURT: All right. I understand. I'm going to overrule the objection. You can cover it on redirect.

(Thereupon, the sidebar was concluded and the following proceedings were held in open

court:)
BY MR. HUNTER:
Q. Doctor, do you have the web site page from the American Medical Association?
A. Yes, sir.
MR. HUNTER: All right. Give me a moment to figure this out for the jury.
I need your help. You do that and I will read it as it comes up on the screen.

2238
BY MR. HUNTER:
Q. Doctor, do you see the highlighted portion that says that "Secondhand smoke, also known as environmental tobacco smoke or passive smoking, is the third leading preventable cause of death in the United States"?
Do you disagree with the American Medical Association on that point?
A. I disagree. I think it has not been shown to be correct. That is an estimate.
Q. All right. Well, then you agree that it does cause a lot of deaths, but we don't know how many?
A. No. I want to know how many of those deaths can be preventable if we assume that now most of the requirements for eliminating secondhand smoke are in place? Isn't that correct? We now have most

of what all of these institutions have suggested should be done. It is now a law.

Has anyone proven that the institution of such control saves 50,000 lives a year. I don't think that data exists.

Q. Okay. Now, then, let's go, "For every eight smokers who die from tobacco related illnesses one nonsmoker also dies from exposure to

2239

environmental tobacco smoke."

Do you disagree with that statement by the American Medical Association?

A. I don't think that has been shown. That is their estimate of what is going to happen, that one out of eight.

Q. So the American Medical Association, you believe, to be incorrect in their estimation?

A. Well, I don't know if the estimation is correct or incorrect. It just hasn't been shown to be true. It is an estimate.

Q. Okay. And it then says, that is a more than -- that is a more than --

A. 50,000.

Q. Fifty --

MR. REILLY: Judge, can I have a continuing objection to this?

MR. HUNTER: 50,000 persons each year.

THE WITNESS: This statement claims there are 50,000 Americans that die each year from environmental tobacco smoke.

MR. REILLY: Can I have a continuing objection since this is not about lung cancer?

THE COURT: Agreed.

BY MR. HUNTER:

2240

Q. Now, let's go to lung cancer, and -- Will you agree with me that this is the way the American Medical Association, which I believe you said you thought you were a member of, interprets the Environmental Protection Agency, that the Environmental Protection Agency has classified secondhand smoke as a Group A carcinogen, a substance known to cause cancer in humans?

Do you disagree with that?

A. Yes.

Q. The EPA seems to know that, the American Medical Association seems to agree with them?

A. Where is the proof?

Q. Okay. Let me show you, Doctor, an article which we discussed at your deposition, it was in your reliance materials, and at that time was marked as No. 23. And before I show it to you, I will say it is an M.D. Consult Journal article.

What is that?

A. It is a source of information that is updated every three months or so. It is a compendium of articles and a bunch of physicians update it on a regular basis. So it is like a consultative service.

Q. Okay. And it is something when you were

2241

exploring or researching a new field, you would utilize to familiarize yourself with the information available?

A. That's correct.

Q. Doctor, let me direct your attention --

MR. REILLY: Your Honor --

BY MR. HUNTER:

Q. -- bottom of Page 483.

MR. REILLY: Your Honor, I object. Can we do sidebar?

(Thereupon, the following proceedings were had at sidebar:)

MR. REILLY: May I see it? All right. I object to reference to environmental tobacco smoke health effects on children. This is not a case about children. Counsel put this on the screen in reference of health effects of children.

That is why --

THE COURT: Don't you think the jury is

clever enough, adept enough to understand that the reference in the sentence doesn't apply in this case? But it says --

MR. REILLY: No, Your Honor, the sentence is --

2242

THE COURT: It is a known hazardous to health, especially in children.

MR. REILLY: Your Honor --

THE COURT: That has been extensively documented.

MR. REILLY: Your Honor, the case law in Florida is clear.

THE COURT: I have got to balance the harm to you by the fact it is relevant.

MR. REILLY: It is not relevant.

THE COURT: It is not.

MR. REILLY: Not only is it --

THE COURT: The issue is whether or not environmental tobacco smoke is known to be hazardous to health. This witness says I don't know that.

MR. REILLY: Your Honor --

MR. ENGRAM: It is disease specific.

MR. REILLY: This case is about lung cancer in adults.

THE COURT: Right.

MR. REILLY: The case law.
THE COURT: It is not lung cancer in this adult, which you say doesn't exist as a result of exposure to secondhand smoke.

2243

MR. REILLY: You are right.
THE COURT: Period.
MR. REILLY: If I could just make my record.
Your Honor, the case law in Florida is clear that you can't go on a general indictment of someone's product when there is a specific disease at issue and --
THE COURT: You are right. Whether this jury is sophisticated enough --
Can you blot out the words "especially" --
MR. HUNTER: I will just do it with a magic marker.
THE COURT: Do it with a magic marker.
MR. HUNTER: I'm not going to mention anything about that.
THE COURT: No, you won't.
MR. REILLY: Your Honor --
THE COURT: Mr. Hunter --
MR. REILLY: Just so I have made the record clear on that last document, all of these references to 50,000 deaths were about

heart disease, diseases other than lung cancer. So Your Honor asked me the other day, even though you overruled an objection, I need to

2244

move for a mistrial.

I now move for a mistrial based on the allowance of evidence in front of this jury about health effects of cigarette -- secondhand smoke for diseases totally unrelated to this case.

THE COURT: Understood. The motion is denied.

(Thereupon, the sidebar was concluded and the following proceedings were held in open court:)

BY MR. HUNTER:

Q. Doctor, have you been able to orient yourself to Page 483?

A. Yes, I'm there.

Q. Okay. And what -- I would like you to read along with me, that environmental tobacco smoke is known to be hazardous to health. You have blacked out something, and has been extensively documented. And then it says, in an article, and this is really what I'm calling your attention to.

MR. REILLY: Could you just show me what it is you are going to refer to before you put

it up?
MR. HUNTER: The next page.

MR. REILLY: But I don't have it.
MR. HUNTER: I'm sorry.
MR. REILLY: No problem.
MR. HUNTER: Let's do this again. I apologize. I want to start up here at the top.

BY MR. HUNTER:

Q. Okay. In an article by Barnes and others, "It was noted that of 106 reviews, 37 percent concluded that passive smoking is not harmful to health; 74 percent of these were written by authors with tobacco industry affiliations. Multiple logistic regression analyses controlling for article quality, peer review status, article, topic and year of publication revealed that the only factor affiliated with concluding that passive smoking is not harmful was whether an author was affiliated with the tobacco industry."

Do you see that sentence?

A. Yes.

Q. Do you know what, in the medical context, do you know what multiple logistic regression analysis controlling for article quality, peer review status, article topic and year of publication is?

A. Yes, I do.

2246

Q. And do you agree that the only factor affiliated with concluding that smoking is not harmful was whether the author is associated with the tobacco industry?

A. Well, I have two comments about this.

Number one, what you are reading and the conclusion is totally meaningless if you exclude the things that were blacked out in it. So I don't think -- I don't see how the jury can make any sense out of this if you are excluding really what it is all about. Number one.

Q. Let's get into that. Let me lay a predicate with you.

Do you agree that studies have been done on whether environmental tobacco smoke is harmful to children?

A. Yes.

MR. REILLY: Objection, Your Honor.

THE COURT: Just one second. Come sidebar.

(Thereupon, the following proceedings were had at sidebar:)

THE COURT: His comment about the findings, the conclusions are meaningless without reference to the blacked out parts, the

blacked out parts, what are they?

MR. HUNTER: The reference to children.

THE COURT: That is it, just that four words?

MR. REILLY: See, it is totally unfair. And I move for a mistrial.

THE COURT: It certainly is. Because I have tried to protect that which is really not relevant to this witness and the witness is making it relevant.

MR. ENGRAM: It is irrelevant. The studies he's referring to that did this --

THE COURT: Then why shouldn't it be made known to the jury? Since the only way he can adequately explain his answer? Why shouldn't I remove that blacked out portion?

MR. ENGRAM: None of this line of questioning should have been allowed.

THE COURT: I am already passed that point.

Having done that, and you preserved your record, don't I now have to remove that so he can defend his position?

It seems to me that I have to.

Otherwise he's left fuming saying it is an

unfair limitation because you have to understand what they said in its entirety.

MR. REILLY: See, that is why it was improper to allow the question in the first place.

THE COURT: I'm passed that. I still think it is a relevant question.

MR. REILLY: Now you are going to create an even worse situation.

THE COURT: Well, your choice. Regardless of what happens, your choice. I can allow it to be removed and he can then explain his answer, or I can leave it in place. Your choice.

MR. REILLY: Your Honor, I'm not making a choice because I'm not going to participate in the error. That is not my job. My job is to preserve -- to identify --

THE COURT: Leaving aside for a moment if it is an error, it is already in the record.

You refuse to do that; I will do it for it. I'm going to remove it so he can explain his answer.

(Thereupon, the sidebar was concluded and the following proceedings were held in open

court:)

BY MR. HUNTER:

Q. Doctor, your copy doesn't have the blacked out part; correct?

A. That is correct.

Q. Let me start back where I was. Do you agree with me that studies of the effect of environmental tobacco smoke on children are helpful in determining the effects of environmental tobacco smoke on adults?

A. I think there may or may not be. It depends upon what details or what kind of diseases you are studying.

Q. One of the problems that you have explained to this jury about epidemiological studies is the principle of confounding; correct?

A. Confounding factors, correct.

Q. Right. So if you are trying to compare two groups of people, and you want to take people who have not been exposed to environmental tobacco smoke, and compare them to people who have been exposed to environmental tobacco smoke, if you -- if you can't be sure that the non-exposed group hasn't really been exposed, then maybe what you think to be non-exposed people, people that have never been

2250

around tobacco smoke.

If they actually have been, that would be

a confounder; correct?
A. Yes.
Q. Okay. So whenever you are trying to do an analysis where you take people that you know have been around environmental tobacco smoke and compare them with people who you are pretty sure have not been around environmental tobacco smoke, aren't children one of the best groups to study? Aren't children one of the best groups to compare?
A. Ah, I'm not following your logic. Why should they be?
Q. Okay. Because you and I may go out to a restaurant or we may go into a lounge or somewhere, or we may be at a place where other people are smoking. But to a large extent children may find that they have no exposure to environmental tobacco smoke unless their parents smoke; correct?
A. I see your point, yes.
Q. Is that a legitimate point?
A. I think it is a legitimate point. Unfortunately, the other side of the coin is children cannot give a history, so you are relying on the history of the parents. So I think there is

a plus and a minus.
Q. Okay. But would you agree with me, that when they compare -- when they do the same studies

on, let's say, bronchitis or respiratory illness, children show more of an association with environmental tobacco smoke and disease than adults?

MR. REILLY: Objection, Your Honor.

THE COURT: Just one second. Overruled. Members of the Jury, please keep in mind this case does not involve any claim that cancer or any other disease was caused to a child. Understood?

MR. REILLY: This also is beyond the scope of the direct exam.

THE COURT: Overruled.

MR. REILLY: I didn't ask anything about bronchitis or what was the other disease, asthma or something like that.

THE COURT: Overruled.

BY MR. HUNTER:

Q. All right. Do you remember -- I will say it again. I forget what I said.

A. You were asking me if studies have shown that children are more susceptible to secondary smoke in terms of asthma, cough, et cetera. The

answer is yes.

Q. Okay. But haven't I -- okay. When you compare children's -- studies with children, they show a higher association?

A. That is correct.
Q. And hasn't it been postulated that the very reason for that is, in part, because when they take children, they can find children that actually get no confounding secondary smoke exposure? It is a pure group a lot of times.
A. I think that is a reasonable hypothesis.
Q. Okay. Now, getting back -- I know you wanted to explain an answer. That you said that since we had blacked out what we had blacked out was?
A. These comments had to do with children's reviews.
Q. Okay. And then we went on to say that at least, do you understand that these are only studies relating to children? Or do you believe that this is studies related to all passive smoking?
A. No. My understanding of this is that it is under environmental tobacco smoke and children. So my understanding is that these studies have to do with children.

2253

In fact, there is a second, there is a second paragraph that has to do with adults at the bottom. So the top is just children.
Q. All right. In getting back now to my earlier question, do you not believe, though, that

studies that involve the effect of tobacco smoke on children are also instructive as to the effect of tobacco smoke on adults?

A. I think the answer, we don't know, for example, as far as bronchitis and coughing and allergies, there doesn't seem to be the same effect in children and adults.

Now going to cancer, which is what we are talking about here, it is -- it is inexplicable to me that children that have been exposed to secondhand smoke do not have a higher incidence of cancer, yet adults are claimed to have. That makes no sense to me.

And that is information that is readily available.

Q. All right. We will get to that in a minute, Doctor. Because you have testified at some length about a genetic predisposition for lung cancer; correct?

A. That's correct.

2254

Q. All right. And it may well be that people who get lung cancer, not only from direct smoking, but also those people who get it from secondhand smoke have a genetic predisposition to the carcinogens in tobacco smoke; correct?

A. That is possible.

Q. All right. In fact, the case that you and I were involved with the foundation of your opinion was that the man in that case had a genetic predisposition to tobacco; correct?
A. Everyone who develops a cancer at age 60, 70 and 80 is because of tobacco has overwhelmed the defense mechanisms, that is correct.
Q. Okay. And in that case, it was your opinion that it was a genetic predisposition; correct?
A. Well, yes. It is a different genetic predisposition that we are dealing with in this particular case.
Q. Okay. We will get to that in a minute. Now, before we leave the topic of what the medical articles show, the first article, I'm showing this to the jury, and I will show you it in a minute, the first reference by Philip Morris is the International Agency for Research on Cancer Press

2255

Release Monographs, Volume 83, Tobacco Smoke and Involuntary Smoking, June 2002.
MR. ENGRAM: Your Honor, may we have a standing objection to this?
THE COURT: You do.
BY MR. HUNTER:
Q. Now, my first question to you, Doctor, is,

are you familiar with the international agency for the research of cancer?

A. I'm not familiar with the details of the agency, no. I know it exists. I'm not familiar with who, who are the members and why are they members of the organization.

Q. Okay. You must be familiar with the World Health Organization; correct?

A. Yes, I am.

Q. If I were to suggest to you that the international agency for the research on cancer is a division of the World Health Organization in Lyon, France, would you have any dispute with that?

A. No, sir.

Q. Would you think that they are an authoritative, truthful, reliable group to give information to the public on the issue of secondhand smoke and disease?

2256

A. That depends on who are their experts. I don't know the answer to that.

Q. Wouldn't you agree with the assumption that the World Health Organization, before they took a position on secondhand smoke and whether it was carcinogenic to humans, would put into place reliable individuals to gather that information on their behalf?

MR. REILLY: Object to the form.
THE WITNESS: I would never assume that.
BY MR. HUNTER:
Q. All right. Let me show you a document and ask you -- well, okay. Let me show you a document. I will show you the monograph.
MR. ENGRAM: Can we see that first?
MR. HUNTER: Sure. When counsel is through with this, I will show you the document.
THE COURT: Sir, before you do, is that part of that document?
MR. ENGRAM: Your Honor, I have an objection to this document.
THE COURT: Turn it around, sir.
MR. HUNTER: This is already in evidence.
MR. ENGRAM: I have an objection to this

2257

document. It is a press release, it is not a study.
THE COURT: I'm going to sustain it. He hasn't recognized it as authoritative.
BY MR. HUNTER:
Q. All right. Now, I'm going to show you in a minute the International Agency Research for Cancer Press Release Monographs, Volume 383.
I'm going to ask you to read the document

to yourself and tell me --
MR. ENGRAM: Your Honor, that is the objection I just made. It is a press release, it is not a study.
THE COURT: Let him finish the question.
BY MR. HUNTER:
Q. Would you agree that the press release that you now are now reading referencing Philip Morris is authoritative on the issue of environmental tobacco smoke and whether it causes lung cancer in human beings?
A. I'm sorry. What is your question?
THE COURT: Is the document reliable? Authoritative.
THE WITNESS: I cannot consider this either reliable or authoritative until I know

2258

who the experts are, and how they got to this conclusion.
MR. HUNTER: Your Honor, I would ask the Court to make a determination that the press release by the World Health Organization and the select group of scientists is an authoritative document and you allow me to be permitted cross-examination.
THE COURT: I'm going to sustain the objections.

BY MR. HUNTER:

Q. Now, Doctor, let me move to another subject.

You were unfamiliar with the International Agency for the Research on Cancer.

Being an oncologist, you must have known that there was such a group, being a doctor that specializes in cancer?

A. No. There are certain groups that we are very familiar with, the British Medical Research Council, the International Association of Physicians, of Oncologists. There are several British publications that are very, very prestigious.

This particular group, frankly, I haven't

2259

heard of, and unless I know who the so-called experts are, I can't give you an opinion whether they are -- whatever they say is authoritative or reliable.

Q. All right. But you do agree with me that the World Health Organization is a good group of people; right?

A. I think generally that is correct, yes.

Q. All right. And the World Health Organization is very concerned with the effects of tobacco smoke on people around the entire planet;

correct?
A. I don't think that is the focus of the World Health Organization, but, yes, that is one of the things that they are concerned about.
Q. Earlier in your direct examination, you said there was 180,000 people in the United States and many, many more people around the world who die from tobacco-related diseases; correct?
A. That is correct.
Q. And isn't the World Health Organization at the forefront of studying tobacco and disease in other countries, especially developing countries?
A. No, sir. The World Health Organization is at the forefront of trying to stop Malaria that

2260

kills millions of people in Africa and trying to save children from being starved, which kills millions of children in Africa. They are really very little concerned with secondhand smoke and smoking. It is not a major problem in Africa and Asia. It is a major problem in this country where there is no Malaria and children are not dying of starvation.
Q. And it is your testimony that the World Health Organization is not conducting a worldwide study of tobacco effects in other countries?
MR. REILLY: Objection, Your Honor. What

is the relevance?
THE COURT: Overruled.
THE WITNESS: I have no idea what they are doing in other countries. I can tell you that there -- that is not their major focus.

BY MR. HUNTER:

Q. Well, what are they doing about tobacco and disease in other countries?

MR. REILLY: Objection, Your Honor.

THE COURT: Sustained.

BY MR. HUNTER:

Q. Now, the World Health Organization also promulgates guidelines and studies that doctors in

2261

this country rely upon; correct?

A. I think the influence of the World Health Organization in this country is very tremendous, sir.

Q. Let's get the pathology, because that is your field.

Doesn't the World Health Organization promulgate a set of guidelines that are directed to pathologists, specifically with regard to the question that you testified about here today, in determining whether something is a BAC or whether it is an adenocarcinoma?

A. The World Health Organization put out a

monograph by classification of many things, one of them being lung cancer, yes, that is correct.

Q. And doesn't the World Health Organization give specific guidelines about how you determine on a pathology slide whether what you see through the microscope it is BAC or whether it is adenocarcinoma?

A. Yes, they do.

Q. And if you were to abide by the guidelines set forth by the World Health Organization, then you would have to call this cancer that you see adenocarcinoma; correct?

2262

A. Well-differentiated adenocarcinoma. I would have to exclude the word "BAC."

Q. So if you were to adhere to the World Health Organization guidelines, everything you have said about BAC would be in conflict with their guidelines?

A. No. That is totally incorrect. I said a lot of things about how BAC progresses, how it responds.

Q. All right.

A. The only incompatibility would be that I would have to call it adenocarcinoma, and I would not use the word "BAC," bronchioalveolar carcinoma.

Q. And in addition to the World Health

Organization, so you are not following -- I mean, the very simple point is you are not following -- strike that question. I apologize.

BAC, is it caused by smoking?

A. There is virtually no data on subjects that that is the case.

Q. There is no data that suggests that direct smoking causes BAC?

A. That is correct.

Q. And so, in other words, if we could call this a BAC, then you think that helps the tobacco

2263

companies make the argument that it wasn't caused by tobacco?

MR. REILLY: Object to the form.

THE COURT: Sustained as to form.

BY MR. HUNTER:

Q. Well, in order to call this a BAC, you can't follow the World Health Organization guidelines; correct?

A. That is correct.

Q. All right. Now, what other group is there in the United States who is authoritative in determining the classification of lung cancer such as this?

A. Well, there is the International Association of Pathologists, and there is the Armed

Forces Institution of Pathology. There are different methods of classification.

I must tell you in the interest of time, that whether you call this well-differentiated adenocarcinoma with BAC features or you call it BAC, it doesn't at all influence just about anything I have said in this courtroom.

Q. Doctor, I understand that. I think it will go faster if you let me ask you questions and you give me answers.

2264

A. I apologize.

Q. Let me shorten it and I will put it together.

A. I apologize.

Q. And I apologize if I cut you off. But in order to call this a BAC --

A. Yes.

Q. -- you are not following the guidelines of the Armed Forces Institution of Pathology; correct?

A. Oh, no, no. The Armed Forces Institute of Pathology clearly says that it is permissible to call something adenocarcinoma with BAC features.

Q. Okay.

A. They would not disagree with that way of describing the tumor.

Q. Doctor, let me see if you recall this

question and answer in your deposition.
MR. REILLY: Page?
MR. HUNTER: Page 55.
MR. REILLY: What line?
MR. HUNTER: Starting at 7.
BY MR. HUNTER:
Q. "Question: According to the criteria that we have been through of histological typing, if it --

2265

MR. REILLY: Your Honor --
BY MR. HUNTER:
Q. -- "meaning the cancer, had any appearance of adenocarcinoma, it would be, according to the AFIP and the World Health Organization, it would be, by their guidelines, it would be called adenocarcinoma" --
MR. REILLY: And I object --
BY MR. HUNTER:
Q. "Answer: I think that is fair."
MR. REILLY: And I objected at the time because it was a compound question.
THE COURT: Overruled.
BY MR. HUNTER:
Q. Would you -- Did you give me that answer to that question?
A. Yes. I gave you that answer to that

question. That doesn't mean that the AFIP would disagree with the way that I worded my -- my diagnosis.

Q. All right, Doctor. Let me show you the AFIP standard.

MR. HUNTER: Counsel.

BY MR. HUNTER:

Q. Doctor, maybe we can read along.

2266

First of all, do you agree with me that this is the -- William Travis, M.D.? You are familiar with him, I'm sure.

A. I'm familiar with the three of them, yes. Cauley, Conson (phonetic) and Travis.

Q. Do you want to take a minute to orient yourself to the next page?

Is that the correct Armed Forces Institute of Pathology definition concerning -- on the subject of BAC?

A. That is the World Health Organization criteria.

Q. I'm asking you about the Armed Forces Institute of Pathology.

A. I don't think that this is the criteria of the AFIP.

Q. All right. Let me get that back. Well, let's stay with this in the interest of time.

And by that guideline, we have been through, but by that guideline, clearly you would not refer to this carcinoma as a bronchioloalveolar carcinoma; correct?

A. That's correct. I would call it adenocarcinomas with bronchioloalveolar features. So the main diagnosis would be adenocarcinoma.

2267

Q. Just to get back, the World Health Organization says unless it is entirely BAC, you don't use the term "BAC"; correct?

A. No.

Q. Well, let's -- Okay. We will read it together. Maybe I misquoted what we have here.

A. No, I think we are saying the same thing but in a different way.

Q. Let's try to see if we can agree.

MR. REILLY: Do you have the World Health Organization definitions at hand?

MR. HUNTER: I'm sorry?

MR. REILLY: Do you have the World Health Organization at hand?

MR. HUNTER: Your book isn't oriented like mine.

BY MR. HUNTER:

Q. Doctor, let's work with what we have here so we can move on.

MR. REILLY: Would you like me to show you the spot?

MR. HUNTER: No. Thank you.

BY MR. HUNTER:

Q. "Since many adenocarcinomas of the lung include lesions with a BAC pattern, the designation

2268

BAC should be restricted to cases that show only this pattern."

Would you agree with me that the World Health Organization guideline --

A. I agree.

Q. Okay. Now, let's go to the other side of the page.

All right. Doctor, let me ask you to refer to this document. And while you are -- have you had an opportunity to --

A. Yes. Whatever you have in yellow here?

Q. Yes.

A. Yes.

Q. All right. And the question is, first of all, does this tumor have an invasive component?

A. Yes, it does.

Q. Okay. And in light of the invasive element or component of this tumor, would it not, under the Armed Forces Institute of Pathology guidelines, be referred to as an adenocarcinoma?

A. No. It would be referred to as an adenocarcinoma with mixed bronchoalveolar and asular or papillary subtypes.

Q. Doctor, let's go through this again. I apologize for doing this, but I'm handing you back

2269

the document that we read from.

MR. REILLY: Which one is it?

MR. HUNTER: It is the first document that is on bronchioloalveolar carcinoma.

BY MR. HUNTER:

Q. Go to the first pages, first page of the documents.

A. Yes, sir.

Q. And down at the bottom, it says, "Available from the American Registry of Pathology, The Armed Forces Institute of Pathology." And it says, "Published by the Armed Forces Institute of Pathology."

Do you see that?

A. Oh, you are at the first page. I'm sorry.

Yes.

Q. All right. Now, let's go back to this.

This is where we started. "Since many adenocarcinomas of the lung include regions of the BAC pattern, the designation BAC should be restricted to cases that show only this pattern."

MR. REILLY: Objection, Your Honor. We have been here before.
THE COURT: We have been here before? Overruled.

2270

MR. HUNTER: I have.

BY MR. HUNTER:

Q. You were incorrect earlier, this is the AFIP language?

A. I didn't say it wasn't.

MR. REILLY: Objection.

THE COURT: Overruled.

BY MR. HUNTER:

Q. I thought you said this was World Health Organization --

A. No. No. This is a compendium of the World Health Organization and it is the AFIP. This is the language, and I have absolutely no quarrel with that.

And I did not call this a pure BAC. I don't understand why we are in disagreement. We are in total agreement here. I'm not in disagreement with this.

Q. Just so the jury is clear, this is the AFIP definition?

A. I don't have a problem with that.

Q. You are a pathologist? Don't you know?

MR. REILLY: Objection.
THE WITNESS: It doesn't matter. It is totally irrelevant.

2271

BY MR. HUNTER:
Q. Doctor, just bear with me. Is it or is it not the Armed Forces Institute of Pathology definition?
MR. REILLY: Objection, Your Honor.
THE COURT: Overruled.
THE WITNESS: I don't know if this is what they are saying on their own, or if this a comment on the World Health Organization classification. I think it could be either. It may be their opinion or they are making the comment on the WHO.
BY MR. HUNTER:
Q. And does this help you when we put it on the front when we see it, the Atlas of Tumor Pathology?
A. Counsel, I'm very familiar with this. I have it in my library. As a matter of fact, I have two of them. It helps me. Yes. It is there. It is written there.
Q. But you are saying there is some other thing from the Armed Forces Institute of Pathology that isn't this?

A. No.
Q. Okay. Doctor, let me show you a series of

2272

photographs marked as Plaintiff's Exhibit 1. Which were shown to you at the time of your deposition.
Let me direct your attention, if I might, to No. 14.
MR. REILLY: Can I see what it is?
THE COURT: Show it to counsel.
MR. REILLY: I just wanted to see --
BY MR. HUNTER:
Q. All right. And, Doctor, can you identify that paragraph? I mean, what it is and where it came from?
A. Yeah. That was from the central area of the tumor where the tumor was poorly differentiated.
Q. And would you agree with me that if you were to strictly adhere to the guidelines of the AFIP and the World Health Organization, that you would rule out the diagnosis of BAC because of the infiltration shown through the lung parenchyma in that paragraph?
A. I would not call it pure BAC, that's correct.
Q. You agree that the cells are poorly differentiated?
A. Yes.

Q. And that picture in and of itself would
2273
rule out the possibility of a pure BAC cell carcinoma?
A. I agree.
Q. Okay. Now, you agree that that is a photo micrograph of the cancer of Gail Routh; correct?
A. Yes. I took it.
Q. Okay. Now --
A. In fact, I think that this is -- there is a reproduction in those exhibits that is exactly this same photograph.
Q. Let me show you what was marked as Exhibit 7 at the deposition of Dr. Barsky.
Are they the same photo, photograph?
A. You mean mine and his?
No.
Q. It is not the same photograph; correct?
A. No. No.
Q. But does it show the same thing?
A. Well, it shows an area of scar formation where there is an invasion by cells, yes. Biologically, it shows the same thing.
Q. And if you were to adhere to the strict definitions, again, of the AFIP and the World Health Organization that would rule out the statement of BAC; correct?

2274

A. A pure BAC, yes. It would rule it out.
Q. All right. Now, look at question -- page -- Pictures 39 and 40.
A. Okay. Got them.
Q. Are those photographs, are they indicative of a run-of-the-mill adenocarcinoma?
A. Yes.
Q. Okay. Now, Doctor, the difference between the way you apply the definition and the guidelines of the AFIP and the World Health Organization is essentially that those two organizations say that the -- if there is -- if there is -- there has to be a predominance or there has to be an entire picture of BAC before you call it BAC; correct?
A. It has got to be a hundred percent pure pattern BAC, that's correct.
Q. And in this case, we don't have a hundred percent pure BAC; we have a mixture of cell types; correct?
A. That's correct.
Q. And we have invasion; correct?
A. Correct.
Q. And a pure BAC does not invade; correct?
A. That's correct.
Q. All right. And we also have in this case,

2275

something that a pure BAC does not do. We also have metastasis to the lymph nodes; correct?

A. No, incorrect.

Q. We do have a metastasis to lymph nodes; correct?

A. Yes.

Q. And we have -- And those are the hilar lymph nodes?

A. That's correct.

Q. And the mediastinum?

A. No. There is a difference between hilar and mediastinum.

Q. All right. And which are the nodes which were positive for metastatic disease?

A. Well, it was my impression that they were hilar, but it is not clear in the -- either the surgical definition or the pathology definition whether they were hilar or mediastinum, and it is not easy to tell.

Q. So you were looking at tissue under the microscope and you weren't exactly sure where anatomically in the patient that tissue came from?

A. You can't tell under the microscope the anatomic location.

Q. What you could see, you knew it was lymph

node and you knew it was metastatic disease?

A. That's correct.
Q. It was poorly differentiated; correct? In the nodes?
A. Well, you really cannot apply that in the nodes. That is a definition of the primary. But the cells in the node were part of the tumor, they were cells similar to the tumor.
Q. Okay. Now, when a tumor travels through the air of the lung, you call that erogenous; correct?
A. That's correct.
Q. Now, when a tumor travels through the lymphatic system and it goes from lung tissue to a lymph node, do you call that a lymphatic progress? What do you call it?
A. Lymphatic metastasis.
Q. And adeno generally will metastasize lymphatically; correct?
A. That's correct. And through the regular circulation, through the arteries and veins.
Q. And that is called, since you are the expert, hematology?
A. Hematogenous metastasis.
Q. And the hematogenous, is that what leads

2277

to a metastasis in a different site such as the lung or liver?

A. Liver, bones, correct. Well, actually, you could also get those metastasis from lymphatic spread. So you could be.
Q. Anyway, we do see in this case two things which are uncharacteristic of pure BAC. We see invasion of the lung parenchyma and we also see a lymphatic spread?
A. Lymphatic spread is seen in BAC. It is not common, but it is definitely seen.
Q. Those are two things which are more common with a run-of-the-mill adenocarcinoma?
A. That is correct.
Q. Do you know or have you been made aware of Dr. Mark Brantly and his involvement at all in this case? He's at the University of Florida?
MR. REILLY: Objection, Your Honor.
THE COURT: Overruled. Answer.
THE WITNESS: Yes, I know that he has been an expert in this case.
BY MR. HUNTER:
Q. Did you know of him before you were associated with this case?
A. No, sir.

2278

Q. Now, Doctor, have you had an opportunity to review your deposition --
A. Yes, sir.

Q. -- before today?
A. Yes, sir.
Q. You've changed your testimony on survival rate.
Is that an intentional thing or is that inadvertent?
MR. REILLY: Objection, Your Honor.
THE COURT: Sustained.
BY MR. HUNTER:
Q. All right.
All right. Doctor, I believe your testimony today was that the average survival was two to three years; is that correct?
A. The average survival for?
Q. BAC.
A. That's correct.
Q. All right. In your deposition, did you not say one and a half to two years?
MR. REILLY: Objection, Your Honor.
THE COURT: Sustained, sir.
MR. HUNTER: Judge, if I could have a minute, I will get to the specific page.

2279

BY MR. HUNTER:
Q. All right. Doctor, let me ask you if you recall this question and answer.
MR. REILLY: What is the page number?

MR. HUNTER: Page 77, continuing on to Page 78.

BY MR. HUNTER:

Q. "Question: I notice in the material that was furnished to me prior to this deposition that there were many articles about treatment of lung cancer and the success rates of various modalities of treatment.

"Have you formed an opinion prior to her recurrence as to whether she was, in essence, cured of her disease and it was an issue that you had looked at?"

"Answer: I didn't particularly look at it, but I can tell you what the chances are. In the regular run-of-the-mill adenocarcinoma, Stage II, and this is pathologic Stage II, because we have the surgery, the possibility of cure is about 35 percent, maybe 40 percent.

"In BAC, and again, moving to the spectrum of BAC, well-differentiated adenocarcinoma, the data is not as solid. Most series suggest that the cure

2280

rate is a little bit better, but actually what is pretty clear is the disease free interval is longer. In other words, it may not be that they are more curable. What happens is it takes a little longer for the disease to come back. And once it comes

back, they also live longer, because in a regular type of adenocarcinoma, once the disease recurs, the average survival is approximately six to nine months. That is the average survival. The best series, ten to 12 months.

"In well-differentiated BAC spectrum, the average survival is a year and a half, sometimes two years. So there is a difference in biologic behavior. The difference in the morphology mirrors a difference in biologic behavior. Now with the introduction of Iressa it seems like it also means the difference in response rate."

Did you give that answer to that question at that time?

A. Yes, I did.

Q. Now, my question earlier was, is the change in the -- do you accept that that is a change in your testimony?

A. No, I'm not exactly sure. Because I think I was talking there about survival after recurrence.

2281

Isn't that the context?

MR. REILLY: Your Honor, it says "once it comes back." I object.

MR. HUNTER: I object to Mr. Reilly helping us.

THE COURT: Just ask the question.

BY MR. HUNTER:
Q. Doctor, is that a change or is that consistent with the testimony you have given today?
MR. REILLY: I object, Your Honor.
THE COURT: Overruled. Is that a change or is that inconsistent?
THE WITNESS: It depends on the context of the two days. I mean, it appears to me that I was talking there about the average survival of one recurrence. What I was doing today when I was talking? I don't remember. Was I talking about survival for primary from day one?
BY MR. HUNTER:
Q. Doctor, I'm going to move on. It was a simple question.
A. It is a very complex question.
MR. REILLY: Your Honor, I think he deserves an answer.
THE COURT: Go to the next area. Go to

2282

the next area.
BY MR. HUNTER:
Q. Here is exactly what you said, Doctor. If you take bronchioalveolar and you separate that and you treat them unsuccessfully or you don't treat them, many of those patients live two, three years?
MR. REILLY: Well, you know, I object,

Your Honor. Mr. Hunter has started in the middle of the answer. And he's left out the part.

THE COURT: Read from the front. From the top.

BY MR. HUNTER:

Q. "Answer: If you take small cell cancers and you don't treat small cell cancer or if you were in the 20 percent" --

MR. REILLY: Your Honor.

MR. HUNTER: That does --

MR. REILLY: It starts with "I didn't particularly look at it." This is Page 78; right?

MR. HUNTER: No. Page 43.

MR. REILLY: You are reading from a new spot now?

MR. HUNTER: No. Same spot. You are just

2283

on the wrong page.

BY MR. HUNTER:

Q. Doctor, I will let you look at it.

It seems to me your testimony today, and you correct me if I'm wrong, was that if it doesn't respond to treatment, which means it recurs, your testimony was two to three years.

A. From?

Q. Well, I don't know. That's --
A. Can I read this?
Q. Sure.
A. Let me read the answer.
MR. REILLY: Your Honor, could we know what he's reading from now?
MR. HUNTER: The transcript of this trial.
MR. REILLY: How can you impeach someone with today's transcript?
THE COURT: Sir, you are attempting to impeach him. That is it. I sustain the objection.

BY MR. HUNTER:
Q. Doctor, do you recall your testimony earlier as to whether we were talking about after recurrence or after treatment was unsuccessful?
A. No, sir.

2284

Q. We will move on.
A. But my statement there in that deposition, I certainly agree with that.
THE COURT: We are passed that.

BY MR. HUNTER:
Q. All right. Now, Doctor, would it be fair to say that if Ms. Routh has a genetic predisposition to lung cancer, that her genetic predisposition may well be that she is unable to

deal with the effects of environmental toxins such as tobacco, and that is what has lead her to get lung cancer?

A. That is one of multiple possibilities, yes.

Q. Okay. And some of the alternative factors that you discussed, I believe, were cosmic radiation?

A. That is one.

Q. Would you agree with me that it has never been shown that cosmic radiation causes lung cancer?

A. It has never been shown by cosmic, but it has certainly been shown that radiation causes lung cancer, breast cancer, leukemias, all sorts of malignancy.

Q. How about cosmic radiation?

2285

A. You can’t distinguish them.

Q. Is there a study that you are aware of that shows that cosmic radiation is related to lung cancer?

A. No.

Q. Viral. You said that it may be a possibility of a viral genesis of cancer?

A. Absolutely, yes.

Q. Are you aware of any study which has shown more probable than not that viral etiology to lung

cancer?
A. More probable than not, no.
Q. The Alpha-1 antitrypsin deficiency, would you agree with me that there is no study which shows that that makes it more probable than not that she would be prone to lung cancer?
A. I disagree.
Q. Let me ask you if you recall this question and answer: Page 83 of your deposition.
And I will start at Page 82.
"Question: Doctor, you have been kind enough to provide me with an article on Cancer Epidemiology Biomarkers and Prevention, May 19th, 1999. The first author is Yang."
And prior to your finding this article for

2286

me, I was asking you whether there had been a study of asymptomatic heterozygous individuals who carry -- and then you corrected me on the pronunciation of the word, A L L E L L E.
How do you say that?
A. Alpha-1 antitrypsin. Heterozygous.
Q. A L L E L E, how is that pronounced?
A. Allele.
Q. Allele. I said an allele.
"Question: For Alpha-1 antitrypsin deficiency."

And my question was, "Right. Would you agree with me that based on this study, in light of its size, that you couldn't form the opinion within a reasonable degree of medical probability that the heterozygous asymptomatic nonsmokers are more prone to lung cancer than if they didn't have the deficiency?

"Answer: Okay. The answer to that is that I do not think that data is definitive. I think it is suggestive that that is the case, but it is not definitive.

"Question: Okay. But does that -- does that mean that you couldn't give me the opinion within a reasonable degree of medical certainty that

2287

in a nonsmoker, asymptomatic, with a heterozygous individual, that you can't give an opinion that they are more prone to cancer of the lung?"

"Answer: I don't think I can give you an opinion in terms of more likely than not."

A. I stand by that.

Q. Okay. Now, Doctor, we had discussed at the beginning of the examination that I would follow up with you the questions by Mr. Reilly concerning the other case that you and I were involved with together.

In that particular case, was it your

opinion that that individual had a genetic deficiency or a susceptibility to cancer from tobacco?

A. Yes.

Q. Did you believe that the exposure to the carcinogens in tobacco separated in combination with the genetic predisposition?

A. That is correct.

Q. And, in fact, in that case, we can never identify what genetic predisposition that gentleman had; correct?

A. That is correct.

Q. And in that case, do you remember the

2288

relative risk factor for someone who had given up smoking 20 years earlier?

A. It was relatively small. I don't remember the exact number.

Q. Was it in the neighborhood of 1.1 to 1.3?

A. I don't remember.

Q. Doctor, you agree -- would you agree with me that in light of the -- would you agree with me with this: That in terms of lung cancer, it is rare that the lung cancer occurred before the age of 40, but at the age of 40, the incidence begins to rise dramatically?

A. No, sir. Age 50 it begins to rise

dramatically.
Q. How about this: Up until the age of 40, it is rare after 40 it begins to have a significant increase?
A. What do you call "significant"?
Q. I'm asking you, do you agree with that --
A. Less than five percent occur before age 50.
Q. But my question was, it is rare before 40, and then at the age of 40, the incidence rises dramatically or significantly or begins to rise?
MR. REILLY: I object, Your Honor. That

2289

must be compound.
THE COURT: Sustained. It must be.
BY MR. HUNTER:
Q. Doctor, see if we can look together at the screen. This is from the M.D. consult that we discussed earlier that you provided at your deposition. And I'm referring you to Page 6 of 18.
Am I reading correctly, it says, "Lung cancer is rare before the age of 40, after which age specific rates begin to rise steeply"?
A. I agree that is what it says, but if you look at that publication and look at the numbers, it actually gives you -- gives you the number. Forty to 49, if you add, it is 3, 4 plus 0.7 and 0.4. You

can add, it is 5, 5 percent.
Q. It is 5.6 to be exact.
A. Okay. 5.6.
Q. But the point I asked you was very specific. Lung cancer is rare before the age of 40, after which age specific rates begin to rise, and the word I was looking for, I said "dramatic" or something else, but the word I was looking for was "steeply"; correct?
A. I believe that is a philosophical statement. I disagree. Five percent is not steeply

2290

for me.
Q. Well, most lung cancer is asymptomatic; correct?
A. Yes.
Q. So lung cancers are usually discovered when they cause -- they are usually discovered as Stage III or IVs; correct?
A. Yes, sir.
Q. So this lung cancer was discovered very early; correct?
A. Yes.
Q. So in the traditional scheme of things, had this not -- in almost -- in a manner been fortuitously discovered, she may well have been 52 or 55 or older when it was discovered?

A. That is possible. I'm missing your point, but that is possible.
Q. Well, you said one of the frame works of your opinion was she got it young. And what I'm trying to suggest is, maybe it really wasn't that young, she's just -- after age 40 she's in that group that starts to rise steeply?
A. I accept that. Fine.
Q. And one of the things that you said that was a basis of your opinion was that she's -- she's

2291

been able to survive a long time?
A. That's correct.
Q. Okay. But, again, since the cancer was discovered early, isn't it that -- isn't it a fact that the patients who are discovered earlier have longer survival rates?
A. No, sir. That is incorrect. The survival rates are -- they -- they are actually published according to the initial stage. She is initially staged as Stage II. The fact that she has survived five years, and the fact that she's had a recurrence and is still alive is extraordinary.
Q. You said that there was no definitive test to determine anyone's lung cancer; correct?
What is the cause of anyone's lung cancer?
A. There is no definitive test to detect the

actual cause of any lung cancer. That is correct.

Q. All right. But certainly doctors can form opinions within a reasonable degree of medical probability as to what causes a particular person's lung cancer; correct?

A. Yes, that is correct.

Q. In the case that you and I worked on together, you formed an opinion that tobacco, in that case, in connection with genetic

2292

predisposition, was a substantial contributing factor?

A. That's correct. Again, I call your attention to the fact that the age was very different. The use of tobacco was very different, and the gentleman in that case had two tobacco-induced tumors. We are talking about a different genetic background.

Q. Okay. And also you were examined by attorneys for Tobacco, and they asked you whether there was any test in that case; correct?

A. Yes.

Q. And you said there isn't any, but I can still formulate an opinion within a reasonable degree of scientific certainty?

A. And that is correct.

Q. And they suggested in that case other

factors, such as --
A. Virus.
Q. I'm sorry?
A. A virus. They suggested that it was a viral etiology.
Q. And they suggested that there was histosomiasis (sic)?
A. Schistosomiasis.

2293

Q. Schistosomiasis.
A. A parasite; yes.
Q. And you agreed that those were risk factors for a bladder cancer; correct?
A. Well, not really. A schistosomiasis is a factor for squamous cell carcinoma of the bladder and they were completely wrong about that. As far as the viral etiology of head and neck cancer, it is really something that is just opened up, the data is not conclusive there is an association and whether there is a causation connection is debatable.
Plus this gentlemen had two tobacco, well documented tobacco-induced cancers. So I felt very comfortable saying that direct smoking in this gentleman had been the cause of his disease.
Q. Okay. Let me ask you if you recall this testimony from your deposition in that case, at Page 44.

MR. REILLY: Do you have a copy?
MR. HUNTER: I'm sorry. I don't. Do you want to read along with me?
MR. SILVER: Do you want this?
MR. HUNTER: This is the other case.
MR. SILVER: I'm sorry. Different case.
BY MR. HUNTER:

2294

Q. Question, Page 44, question -- this was being asked of you by an attorney representing one of the tobacco companies.
"Question: Can you tell me what the risk factors are for -- the risk factors for bladder cancer are?
"Answer: The best known are cigarette smoking and analyn dyes. In other parts of the world there are certain parasites, schistosomiasis that is closely associated with squamous cell carcinomas of the bladder.
"Question: Would you agree that age is strongly associated with risk of bladder cancer?
"Answer: Yes.
"Question: Would you agree that there is a greater incidence of bladder cancer in men as opposed to women?
"Answer: That's correct."
MR. REILLY: Your Honor, I would object.

That is a series of questions and answers that are unrelated to this lawsuit.

THE COURT: Read the one that is relevant. I'm waiting for the one that is relevant to the answer he gave her.

MR. HUNTER: I thought we were on the

2295

subject of schistosomiasis.

THE WITNESS: I said the same thing, schistosomiasis causes squamous cell carcinoma of the bladder.

BY MR. HUNTER:

Q. Okay. And is chronic irritation of the bladder a risk factor?

A. Debatable. Depending what the irritant is.

MR. REILLY: Objection, Your Honor.

MR. HUNTER: Let me read this question and answer, Doctor.

THE COURT: This will be the last in the series.

BY MR. HUNTER:

Q. "Question: Is chronic irritation of the bladder also a risk factor for bladder cancer?"

MR. REILLY: It is not even impeachment, so I object.

THE COURT: Overruled.

BY MR. HUNTER:
Q. Do you recall giving that testimony in that case?
A. Yes.
Q. The point I'm making, Doctor, in that

2296

case, although there was no test, as you have said there is in this case and although there was no -- and although there was a genetic predisposition, and although there were other risk factors, you were still able to formulate an opinion that his cancer was tobacco related?
A. Correct.
Totally different cases, counselor. With all due respect, this is a gentleman in his 70s with a huge history of cigarette, cigar smoking, even when you counsel this gentleman many times not to do it, he kept doing it. Two different cancers, two different sites, both related to cigarette smoking.
We are comparing here apples and oranges. It is two different cases. I'm sorry. I disagree with you. I don't think there is any connections whatsoever.
Q. Okay. And the point I was making is that the doctors can disagree on the cause of an individual's lung cancer, even though there is no definitive test? A doctor can believe -- Go ahead.

A. I said I agree with that point.
Q. That was my point. Now, Doctor, your testimony about the amount of money that you have billed in this case, was that -- did you totally --

2297

did you rely upon the tobacco companies to give you the correct answer as to how much you had billed?
Is that your testimony?
A. No. That is not how much I have billed, that is how much I have been paid. That is what they told me.
Q. Okay. How much have you actually billed, including all of the time up until today?
A. I -- I cannot answer that, because I expect there is at least 15 or 20 hours more than that, up to that point.
Q. All right. Your testimony, do you recall your testimony how much you said you had --
MR. REILLY: Objection, Your Honor.
BY MR. HUNTER:
Q. How much you said you had been paid?
THE COURT: Overruled.
THE WITNESS: Yes. I was told I had been paid $27,000.
BY MR. HUNTER:
Q. Let me show you this set of your bills.
A. Mr. Hunter.

Q. Yes, sir?
A. This includes two other cases that I have reviewed for the companies. This is not just this

2298

case.
Q. Okay. And we are going to get to that in a minute.
Do you remember that I wrote you that letter and I told you that I would be asking you the questions about this in the trial?
A. I remember it distinctly.
Q. Do you remember that I said that sometimes witnesses can’t answer the question about how much they have been paid, and that I was asking you to look into that so you could tell us how much you had been paid in all of the cases and bring it up so you could be current today so you could answer my questions?
A. I don’t remember that detail.
Q. All right. Let me show --
A. I gave you this, didn’t I?
Q. Let me ask you if you recall this detail, "The purpose of this letter is to let you" --
MR. REILLY: Your Honor, apparently Mr. Hunter has forgotten that we agreed to give him the absolute latest invoices in response --
MR. HUNTER: Judge, this is a speaking

objection. He opened the door for us.
THE COURT: Just one second. Is the

2299

question that you are asking him, does the bill, the groups of bills that you have given him represent the monies that he's been paid?
MR. HUNTER: No. I'm trying to show that it is more than that.
THE COURT: Overruled. Go ahead.
BY MR. HUNTER:
Q. All right. The number that -- the number that you have actually billed the tobacco companies for all of the cases you worked on is $49,000; correct?
A. It is since October 21st -- I'm sorry, October the 8th, 2001, that's right.
Q. And that is -- How many cases do you have for them?
A. Three cases.
Q. Okay. So in those three cases, and when is the last time that you have sent a bill to them?
A. According to this, September the 2nd this year.
Q. All right. So we are now in October 3rd. How much time have you put in in the last month?
A. Between 15 and 20 hours.

Q. So we are over $50,000?

A. In three years, that's correct.

Q. Now, when I had written you the letter, I advised you that I would be asking you these questions; correct?

A. Yes.

Q. I said, "I'm writing you this letter so you have advance adequate notification that you have been asked these questions. Therefore, I'm requesting you take whatever steps are necessary to be able to provide a completely truthful response to questions concerning the subject matter."

Now, you agreed with that. That is a fair thing for me to ask you to do beforehand?

MR. REILLY: Objection, Your Honor.

THE COURT: Sustained.

MR. HUNTER: All right, Doctor. Thank you.

THE COURT: Members of the Jury, this will be the last witness for today. We are not going to take another witness. He will appear next week.

MR. REILLY: This is going to take a bit.

THE COURT: Do you want a break or do you want to continue?

What do you mean by "a bit"?

2301

MR. REILLY: I have 15 or 16 subjects to cover.

THE COURT: Tell me a time.

MR. REILLY: You know what, it could take until 5:30. I don't know exactly how long.

THE COURT: That is fine.

MR. REILLY: We are going to go over?

THE COURT: Are you comfortable to about 5:30? If you are not, at any time raise your hand and we will take a break.

You need a break?

THE WITNESS: Five minutes.

THE COURT: We will take one more. Members of the Jury, don't discuss the case among yourselves. You will have to go out, by the way, through that door.

(Thereupon, the jurors exited the courtroom.)

(Thereupon, a recess was taken, after which the following proceedings were held:)

(Thereupon, the jurors entered the courtroom.)

THE COURT: Redirect.

MR. REILLY: I need the screen up, Your Honor. They disassembled it.

2302

What do you need to make it work? Oh, there it is.

MR. REILLY: That will do.

THE VIDEOGRAPHER: Okay.

MR. REILLY: Can you jury see?

REDIRECT EXAMINATION

BY MR. REILLY:

Q. Doctor, you were asked a series of questions by Mr. Hunter regarding both whether or not secondhand smoke causes any kind of lung cancer in anybody and what the public health community's position was on that issue.

Do you recall that long series of questions?

A. Yes.

Q. And documents that were put on the screen?

A. Yes, sir.

Q. The public health community has taken a position on this point, hasn't it?

A. Yes.

Q. Do you have any quarrel with the public health community taking a position on this point?

A. None at all. It is based upon perception of risk. If there is a perception of risk, the public health community has to take a position. So

2303

I have no problem absolutely with the position of

the public health community or, for that matter, the federal government or any of the functionaries of the federal government.

Q. And do hospitals take public health positions as well?

A. They do. They shouldn't, but they do.

Q. But you, as a medical scientist, do you look at the cold, hard numbers?

A. Absolutely. I have to. There are two views of this issue. One is the cold, hard data as a scientist would look at it. The other one is to look at it as a public health official. And if there is any doubt, the public health official has to err on the side of being very conservative and take whatever steps are necessary to safeguard a few lives.

Q. Doctor, Mr. Hunter read from a document. We can't find the document right now, but the document says that somebody who has been exposed to secondhand smoke for an extended period of time has increased risk for the development of lung cancer of 30 percent.

That is .3, isn't it?

A. 1.3. Relative risk.

2304

Q. Now, that is a -- That is an old number, isn't it? 1.3?

A. I'm not following you.
Q. The number has been declining --
MR. HUNTER: Judge, he's leading. I object.
THE COURT: Sustained.
BY MR. HUNTER:
Q. Has the number been declining?
A. Yes. The risk has been declining as the number estimates take effect.
Q. Mr. Hunter showed you a 2000 publication, Lung Cancer in 2000; right?
This was from a publication called Lung Cancer, authored by Zhong and others; right?
A. That is correct.
Q. All right. Let's see if I can focus --
A. It is completely out of focus.
Q. That is my specialty, completely out of focus.
Let me zoom up here a little bit.
Now, in 2000, do you see what I have highlighted there? It says, "The relative risk of lung cancer among nonsmoking women who are exposed to ETS from their husband's smoke is 1.2 now."

2305

Is that a very small relative risk?
A. Not as a -- Small compared to direct smoking, absolutely. It is very, very small. You

have got to have a comparison. Yes, it is very small. However, this lady was not exposed to her husband.

Q. I appreciate that.

All I'm demonstrating right now, Doctor, and I'm going to do it here in another minute with another study that Mr. Hunter showed you, the relative risk over time is dropping, isn't it?

A. The predictions are dropping.

Q. Right. And at the bottom of this, it says, "These results are consistent with the hypothesis that exposure to ETS increases the risk of lung cancer."

"While there may be alternative explanations to the data, for this author," he says, "it is more likely that the observed association," your term, "is not an artifact."

What is an "artifact"?

A. An artifact is a spurious observation that you think is clearly due to something but you are ignoring something else that is much more important.

Q. Then he goes on to say that he thinks it

2306

causes lung cancer in nonsmokers; right?

A. Well, this statement is exactly what I'm saying, that there is an association but we do not know if indeed there is causation, that there is a

causative link.
So if this agrees and it causes a hypothesis, I take it as a hypothesis, this paragraph is exactly what I have been saying.
Q. All right. Now, let me see -- yes. In this study -- This is a meta-analysis, isn't it, Doctor?
A. Yes, sir.
Q. Now, a meta-analysis is where you take a bunch of studies, the data from a bunch of studies, and you put it all together and you try to make one big study; right?
A. That is correct.
Q. Now, is it right to leave out studies that show no effect?
A. Well, no, it isn't right. When you do a meta-analysis, the person who is doing the meta-analysis takes the liberty to include whatever they want and exclude whatever they don't want. And in addition to that, the problem with the meta-analysis is that you have to be very careful

2307

not to compare different designs for studies. Because it can affect the data tremendously. And that is very different.
Q. Doctor, let's look at what Zhong and others left off of their meta-analysis.

MR. HUNTER: What page are you on?
MR. REILLY: It looks like 18, but I'm not sure.

BY MR. REILLY:

Q. It says, "However, there was a marked heterogenity in the Chinese studies arising from protective effects found in three studies."

What is "protective effects" in epidemiology?

A. It means that the variable that you are studying, instead of doing harm, protects you.

Q. Does that mean that there were three Chinese studies that showed not only no risk, but a less than one result from those studies?

A. That is correct. And, incidentally, has been shown in children's studies repeatedly.

Q. Well, I'm going to get to that, Doctor.

So Zhong and others left out studies that showed that exposure to secondhand smoke not only didn't cause an increased risk, it actually had a

2308

lower risk?

A. They left it out under the premise that those results didn't make any sense.

Q. Mr. Hunter showed you this Surgeon General's Report information. And here is a page he didn't show you.

Let's take a look. The title of this is "Relative Risks for Lung Cancer Associated with Workplace Exposure to Environmental Tobacco Smoke Among Women who Never Smoked"; right?

Is that so out of focus no one can read it?

JUROR NO. 6: Yes, we can't see.

MR. REILLY: I apologize.

THE WITNESS: Let me do it. No. Cannot do it from there.

MR. REILLY: It was in focus for Mr. Hunter.

MR. HUNTER: Do you want me to give a shot of that?

MR. REILLY: Yeah, right.

MR. HUNTER: I learned how to do it.

THE WITNESS: It should be here.

BY MR. REILLY:

Q. You know what, I will zoom in.

2309

JUROR NO. 6: That is good.

JUROR NO. 5: That is better.

MR. REILLY: Thanks.

BY MR. REILLY:

Q. Now, it says, so everybody can read it, it says, "Relative Risk for Lung Cancer Associated with Workplace Exposure to Environmental Tobacco Smoke

Among Women Who Never Smoked."

Now, Ms. Routh's exposure is workplace exposure, isn't it?

A. That is correct.

Q. All right. And these are now studies that are all listed in this study; right?

A. That is correct.

Q. This is what -- These are all of the studies that the Surgeon General is relying on, or referencing in connection with this report; right?

A. That is correct, sir.

Q. Now, when it shows a relative risk of less than one, in other words, for example, just the very first one, 0.7, what does that mean?

A. When it shows a less than one, it means that there is absolutely no significance, or you could interpret that it is actually beneficial.

Q. Now, nobody is saying --

2310

A. That is in the statistical sense. You have to discard the benefit, because it doesn't make biologic sense, but if you were strictly a statistician, forget what it means, just look at the numbers, forget that this has to do with tobacco and cancer. If you forget that it has to do that and just look at the numbers, that means that there is a beneficial effect.

Q. But you are not saying that there is a beneficial effect --
A. It doesn't make any sense.
Q. -- to being exposed to secondhand smoke in terms of not getting lung cancer; right?
A. It doesn't make any sense, no.
Q. But this is what statistics does, isn't it?
A. Well, it depends on how you do it and you interpret them, yes.
Q. Now, do you have any reason to believe that Kabat and Wynder -- Do you know who Dr. Wynder was?
A. No, sir.
Q. Do you have any reason to believe their work was funded by the tobacco industry when they got a less than one relative risk?

2311

A. I have no idea who they were funded by.
Q. Can you imagine the Surgeon General of the United States citing studies funded by the tobacco industry?
A. I think that is hard to believe.
Q. All right. Let's drop down to the Garfinkel.
Garfinkel got a less than one, didn't he?
A. Yes.

Q. Lee, 1986, got a less than one, didn't he?
A. Yes.
Q. I bet no one here can read these names. The focus is not getting any better. It is getting worse.
Janerich got less than one, didn't he?
A. Yes.
Q. And then Ramson, under any exposure, got no association; right?
A. That is correct.
Q. And Stockwell got no association; right?
A. That is correct.
Q. Now, what does it mean to you, as a medical scientist, when you see these kinds of results?
A. It means that the results are

2312

inconsistent. It means that I don't know what to make out of it, but they don't prove anything. The jury is out. We don't know what to make out of it. They are very inconsistent, but the most important thing that you notice in here, these are the confidence intervals.
What that means is that even though the result, let's say here it is 1.3, what the statistics are telling us is that really the result could be anywhere between 0.5 and 3.3. That is

really what it means.
Q. I haven't gotten to the confidence interval yet. I'm talking about the raw results.
A. The raw results are really all over the place. You can't make any -- you certainly cannot make any predictions about the population, you can even be less certain about the individuals.
Q. Now, Doctor, did you make these numbers up?
A. I have nothing to do with it.
Q. But do you have any quarrel with the Surgeon General saying, hey, that is enough for me?
A. As I said before, I think the Surgeon General made a decision that was designed for public health. And when you make those decisions, you

2313

weigh the possible benefits and the possible bad impact in the population. And he thought that more likely than not that he was benefitting the population, so he made his decision.
Q. Under the confidence interval column, the numbers in parenthesis, is it true that if --
MR. HUNTER: Judge, these are all leading questions. He should ask what the confidence --
THE COURT: Sustained, sir.
BY MR. REILLY:

Q. Doctor, what does it mean if the confidence interval includes between those two numbers the number one?

A. The confidence interval is a set of numbers when the statistician is telling you that the true value is anywhere between those numbers. So the true value here is anywhere from 0.7, 0.2 and 14.1. An amazingly large confidence interval.

So the numbers are telling you that it could be zero, it could be more. It is anywhere in between.

Q. Now, the study at the bottom is Baffeta; right?

A. That is correct.

2314

Q. So that is a study referenced by the Surgeon General; right?

A. That is correct.

Q. The Baffeta study -- Mr. Hunter kept talking about the International Agency for the Research of Cancer. Here is the Baffeta study.

MR. HUNTER: Judge, this is outside the scope of my direct. I didn't go into the Baffeta study.

MR. REILLY: It is cited in his --

THE COURT: Overruled.

BY MR. REILLY:

Q. Here is the Baffeta study. This is a 19 -- Let's look at the bottom. This is 1998, isn't it?
A. That's correct.
Q. Published in the Journal of the National Cancer Institute; right?
A. Yes.
Q. That is part of -- Mr. Hunter kept talking about the National Institute of Health where you were a resident.
A. This is the publication of the National Institute of Health. That is the Journal of the National Cancer Institute. That is where I was a

2315

resident, that's correct.
Q. Well, let's look at what this found.
Under background, this is -- Doctor, is this the latest and largest study conducted on this subject of secondhand smoke and lung cancer?
A. I think most of his data is European, yes.
Q. Under background, it says, "An association between exposure to environmental tobacco smoke and lung cancer has been suggested."
Is that completely consistent with your opinion?
MR. HUNTER: Objection, leading.
THE COURT: Overruled.

THE WITNESS: That is exactly what I have been saying here for eight hours.

BY MR. REILLY:

Q. Did you write this?

A. No.

Q. I apologize for how long you have been here.

A. That is all right.

Q. Conclusion. You know, I'm sure these jurors have never seen a medical study like this before, but would you explain to them what this first major column is, where it starts with the

2316

background and ends with a conclusion?

A. Okay. Yes. Yeah. The way that all of this -- in fact, all medical studies, in particular epidemiological studies, are done, is you start with the background, what are you trying to prove.

The second is, it tells you what is the population that you are studying. The third, it tells you what you are doing to that population. How are you getting the data?

The fourth, it tells you what -- this is the detail of the results, that is the data that you got.

And finally, you have got a conclusion for those who are too lazy to go through the entire

whole thing. And that is what the conclusion is in yellow.

Q. Doctor, let's look under conclusions.

Now, you remember Mr. Hunter asked you about whether or not children were a really great group to study the effects of secondhand smoke?

A. Yes, he did.

Q. What was the conclusion -- Let me back up one step.

Why was it that children were such a great group to study in terms of their exposure to

2317

secondhand smoke and the results or the effects of secondhand smoke?

A. Mr. Hunter suggested the reason they were so good is because you eliminated a lot of confounding variables.

Q. Just very briefly, confounding variables would be?

A. Confounding variables would be things that you are not really thinking about because they exist. They are out there, people telling you lies. Viruses that you can't detect. All sorts of genetic problems. Things that are -- that you cannot identify. Those are confounding variables.

Q. All right. So let's see what their result was when they looked at childhood exposure to

environmental tobacco smoke and lung cancer.
Did they find any association between childhood exposure to ETS and lung cancer risk?
A. They found absolutely no association between childhood exposure and lung cancer risk.
And if you look at the tables on the back, you will find that all of them are below zero, suggesting exactly the opposite, that if you expose children to smoking, they are protected later on from getting cancer.

2318

That makes no sense, but that is what the results show.
Q. Is that part of the reason why --
MR. HUNTER: Judge, he's leading, I object.
THE COURT: Sustained.
BY MR. REILLY:
Q. Let's read on. It says, "We did find weak evidence of a dose response relationship between risk of lung cancer and exposure to spousal and workplace ETS."
What does that mean?
A. It means that weak, "weak" means that it was there. It wasn't impressive. And it also means, if you read on in the article in details, which I have read, that the only suggestion of a

dose response relationship is at the higher exposure. There is no suggestion -- I mean, there is no increase in the lower exposure.

Again, suggesting that at a certain level, secondhand smoke does nothing.

Q. Let's read on.

A. There was no detectable risk after cessation of exposure.

Q. What does that mean?

2319

A. It means that if you got divorced and you are not exposed any more to your husband smoking around you or your wife, then there is no risk.

Q. Now, Mr. Hunter went into great length about the smoking cessation of Mr. Lukacs, the case in which you testified on behalf of Mr. Lukacs at the request of Mr. Hunter.

A. It is a totally different matter, as I suggested.

Q. But here is my question: There had been a long smoking cessation in his case; correct? Or some smoking cessation?

A. Some.

Q. Is it consistent with the experience in smoking if there is no detectable risk of cessation of exposure in secondhand smoke?

A. You cannot -- You cannot reach that

conclusion. You are talking about two different sets of data. You are talking about people who have been exposed to enormous amounts of smoke and carcinogens versus people who have been exposed in comparison very minimal.

The fact that when you stop the very -- the tremendous exposure, the risk goes down, doesn't mean anything, and you cannot correlate that with

2320

the very minimal exposure.

We are talking about two different worlds in here, which is what I explained before, that I give carcinogens every day, substances that cause cancer every day. If I exceed a certain amount, it kills the patient. If I give it in therapeutic amounts, I cure patients. That is a fact of life. There are thresholds.

Q. Doctor, let's read on. It says, "During the last 15 years, epidemiological studies have been conducted on the association," your word again, "between exposure to environmental tobacco smoke and lung cancer. Several authors and regulatory agencies have concluded that a causal link has been established, whereas some authors consider that bias and confounding factors constitute a plausible explanation for the observed association."

A. Two key words. "Bias." What does that

mean? Well, it means that well meaning individuals, very well qualified individuals, can look at the same set of data and, unfortunately, come out with totally different explanations, particularly when you are dealing with very small differences in statistics. That is bias.

Confounding factors, I have already

2321

explained. Those are factors that we know exist but we can't define. And we try our best to balance for them, but it is not easy.

Q. So, Doctor, are there a range of opinions within the medical and public health community about whether or not secondhand smoke causes lung cancer?

A. There is a definitive range of opinion, absolutely. Very well meaning very well qualified people differ in their opinions.

Q. And is the range set out right here?

A. Absolutely.

Q. Here is the specific information about children, isn't it? Childhood exposure to ETS -- Let me see if I can't get the whole thing.

A. Maybe I can read it.

"A total childhood exposure to ETS, a total of 389 case subjects. Case subjects meaning we know that they were exposed to secondhand smoking. And 1,021 control. That means that in

theory they were not exposed. Reported ever having been exposed during childhood for an overall odds ratio of 0.78.

The confidence limits are both below zero. So this is definitively not a significant result. In all three centers, the odds ratio that is

2322

essentially the risk, was below one.

Q. Doctor --

A. Do you want me to read the rest that you have in yellow?

Q. Sure.

A. "There was a decreasing trend, according to cumulative exposure, expressed either as smoker years or weighted smoker years. The risk of lung cancer from exposure to ETS during childhood was similar in men and women. No pattern emerged according to age of diagnosis or histologic type of lung cancer."

Q. What does that mean?

A. What is disturbing is this makes absolutely no sense. There is a decreasing trend according to cumulative exposure.

Q. You mean if you got exposed more?

A. If you got exposed more, you had less risk. It makes no sense.

Q. That is this in reverse, isn't it?

A. That is -- Exactly. It is that in reverse. The curve is going the other way.
Q. That means if you get exposed more --
A. You get less risk.
Q. -- the risk goes down.

2323

A. Yes. The risk of lung cancer of exposure to ETS was similar in men and women. There was no risk, so the same. And there was no pattern or histologic type. This whole thing is senseless, meaningless.
Q. Is that why you are troubled by the evidence that others rely on?
A. That is one of the reasons I'm very troubled, because you would expect that if you are exposed as a child, particularly accepting the data that secondhand smoke causes cough and bronchial asthma, et cetera, in children, so they are affected, yet the cancer risk goes down? That means they are affected, they are getting the smoke, they are coughing, they are getting short of breath, they are getting asthma, so they are being exposed and they are getting affected. Yet there is no cancer risk.
That does not at all indicate a relationship between secondary smoke and cancer risk later on in life.

Q. Just so there is no question that this didn't come from anybody in the tobacco industry -- I know no one can read that. Why don't you read for me the affiliations of the authors?

A. Well, this is the Journal of National Cancer Institute. I assure you that they would not have published this if there was any evidence that this would have been financed by the tobacco industry.

Q. In the lower right-hand corner it shows the affiliations.

Just read off a few of them.

A. Well, this is from Baffeta, the International Agency of Research and Cancer. The reference of Spain, Germany. A lot of hospitals in France. Oxford in England.

Multiple different centers that contributed to this report.

Q. Doctor, thank you. Let's switch topics.

Before I switch, though, in Mr. Hunter's case, did you base the opinions you expressed upon a reasonable degree of medical probability, certainty, your best judgment?

A. Absolutely.

Q. Have you based your opinion on whether or not secondhand smoke has been shown to prove -- has

been shown to cause lung cancer on your best judgment?
A. Yes.

Q. Let's switch to what kind of cell type of lung cancer this is.
Mr. Hunter repeatedly said that the World Health Organization -- Is this the World Health Organization diagnosing manual?
A. Yes, it is.
Q. It is called "Histological Typing of Lung and Pleural Tumors"; right?
A. Yes, sir.
Q. World Health Organization, International Histological Classification of Tumors; right?
A. Yes, sir.
MR. HUNTER: Could I see what you are --
MR. SILVER: Is this the old edition or the new edition?
MR. REILLY: Take a look at it.
BY MR. REILLY:
Q. Doctor, is there -- is Ms. Routh's tumor an adenocarcinoma with mixed subtypes?
A. Yes, sir.
Q. Section 1.3.3.5 addresses adenocarcinoma with mixed subtypes; right?
A. That is correct.

Q. It says, "The majority of adenocarcinomas show a mixture of the above histological subtypes.

2326

Above includes bronchioloalveolar carcinoma"; right?

A. That is what I said.

Q. These tumors are called adenocarcinomas and the various patterns identified may be addressed in a comment. For example, adenocarcinomas with a prominent bronchioloalveolar pattern that have an invasive component should be called adenocarcinoma mixed bronchioloalveolar and asular; right?

A. That is exactly the paragraph that was in the AFIP manual that I was shown. And I could not agree more.

Q. That is exactly what you called this, isn't it?

A. That is exactly what I called it. But I hadn't read this before.

Q. You have no dispute with the WHO?

A. Not at all.

Q. You have no dispute with the AFIP?

A. I said that before.

Q. But you have got to look at the whole book; right?

MR. HUNTER: Judge, I object. I object to that.

THE COURT: Sustained.

BY MR. REILLY:

2327

Q. Have you changed your opinion one scintilla regarding --
A. No, sir.
Q. -- what kind of cancer this is?
A. Not at all, sir.
Q. Is that exactly what Dr. Hartz called it?
A. That is exactly what he called it.
Q. This is the AFIP. The Atlas of Tumor Pathology, Tumors of the Lower Respiratory Tract.
A. That is correct.
Q. On Page 186, it says "Some pulmonary adenocarcinomas have discohesive zones with large numbers of" -- oops, yes. "Large numbers of single cells that infiltrate the interstitium or flood intact air spaces. This last feature can also be seen in some bronchioloalveolar carcinomas"; right?
A. That is correct.
Q. The AFIP allows for invasion --
MR. HUNTER: Judge, this is leading. I object.
THE COURT: Sustained.
MR. REILLY: I'm sorry. I didn't hear.
THE COURT: Sustained.

BY MR. REILLY:

Q. Does the AFIP allow for invasion of tissue

2328

and the diagnosis still be BAC?
A. Well, I think that what it says here is that some areas of adenocarcinoma with bronchioloalveolar features can have discohesive. That means that the cells are separated. And large number of single cells that infiltrate interstitium. It fits that particular case.
Q. That is this tumor?
A. Absolutely. It fits the area that I photographed that I showed at the end. That is exactly what it shows, discohesive separate cells, they are not bunched together, that infiltrate the interstitium. Yes, that is what it shows in there.
It says the feature can be seen in bronchioloalveolar carcinomas. It is not the usual, but it is an adenocarcinoma with bronchioloalveolar pattern. There is no difference.
Q. Mr. Hunter pulled out one of your photo micrographs; right?
A. That’s correct.
Q. And he said if you just looked at this, if you just looked at this one, what would you call it?
MR. HUNTER: Judge, that is not what I said, and I object to him characterizing.
THE COURT: Members of the Jury, your

2329

memory of what was the prior of the testimony and questioning in this case will count. Overruled.

THE WITNESS: I'm sorry. Go ahead.

BY MR. REILLY:

Q. Mr. Hunter said if you just look at this one --

MR. HUNTER: Judge, I object.

THE COURT: He's going to ask you to assume what this doctor says.

BY MR. REILLY:

Q. Mr. Hunter had you look at just that one; right?

A. I believe Mr. Hunter asked me if I had only seen that pattern, would I have called a bronchioloalveolar carcinoma, and the answer is absolutely not. But that is not the only pattern in that tumor. In fact, that is the minority of the pattern. The predominant one is the Swiss cheese.

Q. That is exactly what I was going to get to.

Doctor, if you only look at one area and you don't look at the whole tumor, or as much of it as you can, you can be mistaken on what kind of tumor --

2330

MR. HUNTER: Judge, I object, leading.

BY MR. REILLY:
Q. Can you be mistaken on what kind of tumor you have?
MR. HUNTER: That doesn't correct the question. I still object.
THE COURT: Overruled.
Answer the question.
THE WITNESS: In order to characterize the tumor and subdivide it, you have got to have multiple sections. You have to take the piece of tissue, cut it and get multiple sections, sample it. Otherwise you are going to miss that. That was exactly what was done here and the predominant pattern was the well-differentiated bronchioloalveolar pattern.
BY MR. REILLY:
Q. Doctor, based upon a reasonable degree of medical probability, did Ms. Routh's Alpha-1 antitrypsin cause her or contribute substantially to the development of her lung cancer?
A. Well, I think it is fair to say, counselor, is that is the only unquestionable finding in terms of the genetics of this disease. When you put it together with the rest of what I

2331

said before, the age, the type of tumor, the progress, the response, plus the finding of the

Alpha-1 antitrypsin, then you have to say that it is rather very unlikely that the cause of his tumor was indirect smoking.

If you take an isolated finding, the Alpha-1 antitrypsin deficiency, you can't say that, you have got to take the whole case. That is the only way to reach a conclusion.

Q. Doctor, if Ms. Routh had never flown on airplanes where smoking was permitted, in your opinion, would she still have lung cancer today?

A. I think more likely than not, that's correct.

MR. HUNTER: No other questions.

THE COURT: Members of the Jury, have you any questions of the witness?

You do.

Ms. Clerk, will you collect the questions?

(Thereupon, the following proceedings were had at sidebar:)

THE COURT: Juror No. 4, is Alpha-1 antitrypsin considered an immunodeficiency syndrome?

MR. ENGRAM: Juror 4?

2332

THE COURT: Question two, from the same juror, can herpes virus be one of the viruses that activated the bad --

MR. REILLY: Gene.
THE COURT: "Lag" or "back"? Where my finger is.
MR. HUNTER: Back.
MR. REILLY: Back.
THE COURT: Bad. Terrible D.
Bad genes which cause cancer? The herpes virus, can it be one of the viruses that activated the bad genes that cause cancer?
All right. I will ask.
MR. HUNTER: I object to that. I have a reason for it. We have a Motion in Limine and an order on that, Your Honor.
THE COURT: There is another question -- There is a pretrial order in limine?
MR. HUNTER: Yes. This lady -- There is no contention that the herpes virus had any connection with this development of lung cancer, and there was a Motion in Limine that nobody be permitted to mention the fact that she has herpes.
MR. REILLY: Mr. Hunter --

2333

MR. HUNTER: I didn't finish, Counsel.
THE COURT: Let him finish.
MR. HUNTER: Mr. Upshaw put a document in front of the jury on the screen and it showed

that she was given with Zovirax?
If you had the herpes virus, you would probably know that Zovirax is used to treat the virus. Obviously one of these jurors is knowledgeable enough to know that, he's now interested in the herpes virus.
MR. REILLY: I don't think that is correct, Your Honor.
THE COURT: Is there an order that says pretrial there will be no reference to herpes in this case?
MR. REILLY: I don't think that is where this comes from.
THE COURT: Is there such an order?
MR. SILVER: Yes.
MR. UPSHAW: We agreed we wouldn't bring it up as an issue. We are not bringing it up as an issue. That is not the question.
MR. REILLY: That is not why this came up, I don't think. Because Mr. Hunter brought up human papilloma virus, which is herpes, in this

2334

witness's examination. That is how this --
THE COURT: I recall the use of the words.
MR. HUNTER: No. I didn't bring that up.
MR. REILLY: Not us.
MR. UPSHAW: Excuse me.

THE COURT: Someone said it.
MR. HUNTER: The witness did.
MR. REILLY: Well, based on an answer to a question you posed.
THE COURT: All right. I'm not going to ask it.
MR. UPSHAW: Your Honor --
THE COURT: There is testimony in this case already that a virus can be a cause. We don't need to go back over that, especially in light of the pretrial order.
MR. REILLY: Your Honor, here is the problem. There actually is evidence that you can get lung cancer from HPV.
THE COURT: Why, then, was there a pretrial order that says we are not going to do that?
MR. UPSHAW: Our only agreement, Your Honor, was that we were not going to bring it up, the words that she had, she had herpes.

2335

Now, Mr. Hunter, I didn't know Mr. Hunter.
MR. HUNTER: You guys brought it up.
THE COURT: Don't interrupt.
MR. UPSHAW: Excuse me. I didn't know Mr. Hunter was going to go into the details.
THE COURT: That is the other case.

MR. UPSHAW: That is the other case. All that brought up on direct, you testified in another case and Mr. Hunter was counsel.
MR. HUNTER: No, he said --
THE COURT: Stop. Stop.
MR. HUNTER: Okay.
THE COURT: Contain yourself. You will have a chance.
MR. HUNTER: Okay.
THE COURT: It is Friday afternoon. It is a quarter to six.
MR. UPSHAW: He's having a very tough time today.
My point is, if Mr. Hunter had not gone into the detail of the case as to what this doctor's opinions were with regard to viruses and --
THE COURT: He's not the first witness to testify a virus can be one of the factors.

2336

MR. UPSHAW: I understand that.
So the question, I think, is valid from the testimony, it has nothing to do with the document that may have --
THE COURT: Does someone have handy the order that deals with the question of references to virus?

MR. HUNTER: Stuart, can you get that?
MR. REILLY: Why don't you go on to the next question?
THE COURT: I'm going to come back to it. The question from Juror No. 7 --
Off the record.
(Thereupon, a discussion was held off the record, after which the following proceedings were held:)
THE COURT: Next question, you mentioned a number of possible causes for Ms. Routh's cancer including genetic predisposition and radiation during flight.
Can you say definitively that her secondhand smoke exposure was not a factor either alone or in combination with other factors?
Obviously that is a good question. I will

2337

ask it.
MR. ENGRAM: But definitively?
THE COURT: Can you say definitively.
MR. ENGRAM: That is not the standard. It was not a factor.
MR. UPSHAW: That is not the standard.
THE COURT: I know that. It is more likely than not.

MR. ENGRAM: Right.
THE COURT: I think he's already answered it once or twice, but I will ask it.
Question 2, how common are BAC features in standard undisputed adenocarcinoma?
It is probably --
MR. REILLY: We will help him out.
THE COURT: Question, how often do they appear and to what extent are they visible in ordinary tumors in which they are observed?
All right. I will ask that.
MR. HUNTER: It was a good question, both of those.
THE COURT: Let's get back to the herpes virus.
MR. SILVER: We are looking for it, Your Honor.

2338

You know, the prejudicial effect of talking about herpes in this patient.
THE COURT: Sure. I understand.
MR. SILVER: -- well overwhelms the probative value.
MR. REILLY: Well, apparently, they are already interested in their own minds.
MR. SILVER: Judge --
MR. HUNTER: Judge --

THE COURT: That assumes they understand that the herpes virus was the issue here. I don't know that I'm ready to make that assumption.

If we eliminate it and just say can a virus with one of the -- Can a virus be -- can a virus activate the bad genes that cause cancer?

MR. UPSHAW: That is fine.

THE COURT: All right?

MR. HUNTER: I object to that, and I don't think there is -- I don't think that is an appropriate question. Because that juror is thinking herpes when he hears the question, I know she was taking Zovirax.

MR. UPSHAW: Unfortunately, that is where

2339

it came from, it came from your cross examination. But I think if you leave out of the word, that was all we had agreed, to leave out the word.

THE COURT: I would like to see the order.

MR. SILVER: It is not an order. It was an agreement pretrial. That is a transcript of the pretrial. They agreed.

THE COURT: "The second is a Motion in Limine to preclude all references to herpetic

infection. They have agreed.
The Court: That is agreed."
MR. HUNTER: This is a reference to that. Judge, you would be amending this juror's question.
THE COURT: I'm not happy about amending his question either. I'm not going to ask it. All right.
(Thereupon, the sidebar was concluded and the following proceedings were held in open court:)
THE COURT: Are you ready?
Is Alpha-1 antitrypsin deficiency considered a immunodeficiency syndrome?
THE WITNESS: No, sir. It has nothing to

2340

do with immunity. It has to do detoxification of certain chemicals that are essentially cleaners, those cleaning enzymes.
It is like you take too much of a -- of Clorox and put it in some area. Alpha-1 antitrypsin comes in and makes sure it is not too much. It is detoxifying.
It has nothing to do with immunology. You mentioned a number of possible causes for Ms. Routh's cancer including genetic predisposition and radiation during flight.

THE COURT: Can you say definitively her secondhand smoke exposure is not a factor either alone or in combination with other factors?

THE WITNESS: I cannot say definitively no to anything. You cannot say definitively no to secondhand smoke. You cannot say definitively no to viruses. You cannot say definitively no to radiation. You cannot say definitively no to jet fuel in the airport.

You cannot definitively rule out anything. That is impossible in the scientific arena. You cannot say that.

You can say the opposite. You can say it

2341

is unlikely to be a factor. You can never say it is impossible for it to be a factor.

THE COURT: How common are BAC features in standard undisputed adenocarcinoma?

THE WITNESS: Well, if you read the literature and remember that the definition has changed over the years, it varies between seven and 10 percent to make the diagnosis.

Now, you can find focus features in 20, 25, 30 percent of cancer, focus features, meaning the majority is a plain run-of-the-mill adenocarcinoma. But there are small areas

where if you took that alone, you would think of BAC.

THE COURT: How often do they appear? I think you may have already addressed that. And to what extent are they visible in an ordinary tumor in which they are observed?

THE WITNESS: Well, it varies tremendously. Remember I said if you take any type of cancer alone, and you do 50 or a hundred sections, which we will never do, because it is too costly, but this being done and if you take a lot of them, you are going to find different patterns.

2342

But generally one pattern is predominant. And in biology that means that that pattern is going to determine what happens to that patient. So you call it by the predominant pattern.

THE COURT: Any other questions of this witness?

Thank you.

Members of the Jury, we are through for this evening. We will come back Monday at 8:30. You will go back to the courtroom --

THE CLERK: Excuse me. Tuesday.

THE COURT: I apologize. It is Tuesday at

8:30, and we will go back to the courtroom that we were using on the 6th floor. Go directly there.

Please during the weekend don't talk to anyone about the case. Don't let anyone talk to you.

Thank you, Doctor, you are excused.

(Thereupon, the trial proceedings were adjourned at 5:50 p.m.)